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CONTENTS

SPECIALISM: ITS IDEALS AND STANDARDS*

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It is hardly possible to present the ideals of specialism without reviewing its growth. Growth and ideals suggest being. And the process of human development lends itself well to the treatment of this subject. Therefore, let us consider its birth or origin, infancy and childhood, adolescence and maturity.

The birth of specialism, as well as of medicine itself, is a moot question and probably always will be. A modern writer has aptly said: "There was unemployment in the Garden of Eden. Satan began selling apples. Eve, womanlike, went off her diet; ate one." And I have added, with gratitude, instead of keeping the doctor away, that apple was the beginning of his service.

The faltering early life of specialism has been termed by some "pseudo-specialism." At the time of Hippocrates there were no specialists, or at least none who received any sort of official recognition from the general body of physicians; and yet even then there were a few practitioners who devoted themselves preferably to the treatment of certain maladies, like the affections of the eye and of the teeth. Besides these there were, undoubtedly, in the larger communities, men who were ready and competent to undertake the more serious surgical operations. But even these men, as appears from the language of the so-called Hippocratic Oath, could not honorably perform an operation for stone in the bladder; this particular work having been left from time immemorial entirely in the hands of the lithotomists, a class of men who performed no

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other kind of surgery and who, in fact, were considered outside the pale of the medical profession, merely surgical artisans.

During the Alexandrine period the attitude of the best physicians with reference to specialization in medical practice evidently underwent a change—not a very marked one it is true, but yet sufficient in degree to attract some attention. A certain Demetrius of Apamea, a follower of Herophilus, was considered at this time an expert in obstetrics, and toward the end of the first century, B. C., Alexander Philolethis, a disciple of Herophilus, acquired celebrity as a gynecologist. Two physicians, Gaius of Naples and Demosthenus of Marseilles, were noted for their skill in treatment of diseases of the eye. Demosthenus of Marseilles wrote a treatise on ophthalmology that was popular down to the Middle Ages. The first account we have then of specialism is connected with the work of the Alexandrine School, when specialism had become an accepted fact. The first specialists were obstetricians, gynecologists and ophthalmologists.

In Rome the half-educated and untrained man became a specialist, since he could pass with a superficial knowledge of a particular disease or a certain region of the body. The highest class of specialist in ancient Rome consisted of the ocularii, the eye specialists. Some were men of esteem, but the majority were peddlers of eye salves and lotions.

> "Oculist once, you now enjoy
> A gladiator's fame;
> Yet unchanged methods you employ
> And kill men just the same."

Galen thought so little of these ocularii that he considered it useless to write of diseases of the eye because the oculists, so-called, would not understand him. Oculists, however, of the better class held military appointments.

With the Renaissance, much of folklore medicine began to disappear and a certain semblance of scientific effort became a part of what I have chosen to call the beginning of the adolescent period of specialism. Anatomy was developed by such men as Vesalius and the anatomists of this era who followed him: physiology by Harvey and a long line of successors such as Cannon, Bayliss, Starling and Howell, to mention a few men of our own generation. But to this, as to every other rule, there are exceptions. One of the earliest cardiologists was a man who prided himself on the fact that he was a general practitioner, and never anything else. I refer to Sir James McKenzie.

The earnest inquiring spirit of the period of scientific awakening brought a new departure, the microscope, in the early part of the 17th century. What a list of specialties began with the intelligent use of this instrument—bacteriology, pathology, hematology, parasitology and immunology.

The background of orthopedics was laid in 1660 when Francis Glisson employed suspension in spinal deformities: of blood transfusion, when, in 1665, Richard Lower performed the first direct blood transfusion from one animal to another.

"It was not, however, until long after the revival of learning that medicine made sufficient progress to permit of any markedly advantageous specialism. Even the seventeenth century, with its individual scientific endeavor, and the eighteenth century, with its theories and systems, did not advance knowledge and technic to a degree compatible with a high grade of specialization. Really fruitful specialization in clinical work could not appear until after the natural sciences (biology, physics and chemistry) had undergone that great development that was witnessed during the nineteenth century."‡

The development of each specialty through its childhood and adolescence, with its "thumb sucking and temper tantrums," the period of silly dispensations, the period when it was stranded on the rocks of puberty, presents a most interesting and instructive study. Anyone who is at all interested in evolution could have had painted for him no clearer picture of change from homogeneous to heterogeneous, from birth to maturity, than that found in the growth of medicine and its specialties.

Someone has facetiously defined the specialist as one who knows more and more of less and less. This definition may not be so bizarre as at first it may seem. It is absolutely impossible for one mind, even a well-trained intelligence, to comprehend the vast body of medical and surgical knowledge as it obtains today, not to mention skill in performance. So that the only thing left for many is to attempt less and less and endeavor to know more and more of it. Physicians may limit their work to one

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branch of medicine, such as bacteriology or clinical laboratory methods, or they may confine their attention to a particular region of the human body. This may or may not entitle them to be considered specialists. Many, perhaps most, physicians limit their field of practice to a greater or less degree. Specialism in the true sense demands extraordinary knowledge and skill in the chosen line of practice. This will not necessarily come with the number of years spent at it, unless these years are marked by intelligent effort toward improvement, which recalls the Hippocratic aphorism, "Life is short, art is long, opportunity fleeting, experience treacherous or deceptive, judgment difficult." The specialist then is one who not only limits his field of practice but one who possesses superior skill not only in diagnosis but in the application of methods of treatment, surgical or otherwise as well.

There is a tendency to emphasize the importance of the phase of medicine to which one has confined his attention. This can be obviated by building one's specialty on the broad base of general medicine. One must see the body or personality as a whole of which the particular organ is but a part. Even the psychiatrist, whose province is the mind, must not neglect the fact that he is dealing with a mind-body condition.

In a survey made recently by Dr. W. C. Rappleye, Dean of the School of Medicine of Columbia University, it was shown that fewer graduates of the Medical School are engaging in specialty practice. It would be interesting to know the relative numbers so engaged who have recently graduated from our own two medical schools. But Dr. Rappleye's findings may have a broader application than the State of New York. To be more specific, of those who graduated before 1900, 59 per cent are in general practice; 23 per cent limited to a specialty; and 18 per cent are in general practice with interest in a specialty; of those graduating between 1920 and 1928, the percentages are 75 per cent in general practice; 11 in specialty; and 14 in general practice with interest in a specialty. The important thing is the sharp reduction in the proportion of recent graduates who limit their practice to the specialties. "There is," says Dr. Rappleye, "a notable shift recently in the medical education towards discouraging young physicians from going into the specialties without adequate preparation through post-graduate training, and an increase in internships designed to prepare students more particularly for general practice than for a single field of practice."

As a result of these findings, Columbia University has seen fit to offer a new degree of Master of Science, a safeguard to specialty, of which the following are the requirements:

A period of study, after the internship, of not less than three years in the university or in hospitals and laboratories recognized by it, at least one calendar year of which must be spent in the university.

Such intensive graduate training in the basic medical sciences of anatomy, embryology, physiology, biochemistry, pharmacology, pathology, bacteriology and in the other fields of science as shall be recommended by the departments concerned and approved by the administrative board on post-graduate studies in medicine.

An active experience during the three-year period of not less than eighteen months in the hospital, clinics and diagnostic laboratories of the specialty elected.

Written, oral and practical examinations and a dissertation may be prescribed in the specialty elected and in clinical laboratory and public health fields to which the specialty is related.

This is apparently an effort to replace the preceptor method of training specialists—a method which is, unfortunately, rapidly disappearing, due to the fact that there are so many good men in the various fields that it is impossible for one man to retain and train a corps of assistants, as formerly.

The greater field in medicine is still that of general practice. In a city such as Detroit, specialists are numerous and the general impression one gets is that they are in the ascendant in numbers. The medical profession in our larger cities is undoubtedly over-specialized, a condition which is painfully apparent during a period of depression. The trend, however, is in the opposite direction, I believe, in the larger cities of Michigan, as Dr. Rappleye has observed in New York.

There is a great field for general practice, perhaps greater than ever. The general practitioner of the present and of the future will not be of necessity the so-called old time type of general practitioner whose demise

with each obituary notice in the newspaper is deplored. He will be as up-to-date as modern educational methods and hospital experience can make him. He will meet the exigencies of general practice with modern equipment which will be as far in advance of that of the past generation as his automobile is over the old time equipage of horse and saddlebags. Dr. Charles G. Jennings of Detroit has described him in an able address at the Founders' Day program of the University of Michigan Medical School. His address appeared in full in the December number of the Journal of the Michigan State Medical Society. I commend it to you.

TRANSURETHRAL PROSTATIC RESECTION: A RECENT DEVELOPMENT IN GENITO-URINARY SURGERY: A PRELIMINARY REPORT*

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Within the past few years, improved methods for transurethral removal of vesicle outlet obstructions, although far from perfect, permit the confident hope that an era of radical departure in the management of these obstructive lesions has arrived.

Years ago Young devised the punch which utilized a cold blade within a fenestrated sheath. This enabled the operator to shear out obstructive lesions of the vesicle neck contracture type. Caulk improved upon this method, which was so often complicated by free bleeding, in the use of an actual cautery punch. The inner, or shearing sheath of the Caulk cautery punch provides hemostasis by virtue of a cutting blade activated to cherry red heat by electrical resistance. This instrument, so widely a vogue a few years ago, largely because of its prevention of immediate hemorrhage, has long since lost favor. The slough secondary to its actual cautery blade resulted in a high incidence of late hemorrhage. Some surgeons, led by the extremely skillful originator of this instrument, attempted to attack hyperplastic glands, with almost inevitable serious consequences.

In 1926, Maximilian Stern devised a new type of instrument which utilized the principle of the high frequency cutting current for excising prostatic obstructions. His instrument, like that of Young and Caulk, was composed of a fenestrated sheath, within which was a working unit consisting of a water conduit, electric light and a direct vision lens system. A sliding tungsten loop completed the working unit. This loop, when activated by the high frequency current, could be pushed forward, excising any tissue engaged in the fenestrum. Stern's idea seems to have been sound, but his instruments were inferior, and, more important, his instrument antedated development of satisfactory electrosurgical equipment.

Theodore M. Davis of Greenville, N. C., an ingenious surgeon, possessed of an electrical engineering background, saw the possibilities of the Stern Resectoscope and elaborated upon and refined it until he eventually evolved the instrument now known as the Stern-Davis Resectoscope. The changes involved in this evolution are of little interest to this discussion. The principles underlying it remain as Stern originally planned. More recently, McCarthy of New York has devised an instrument bearing his name, which differs somewhat in detail from the Stern-Davis in application of the principle of the movable loop.

The major development which rendered such instruments of practical worth was the production of electric currents capable of first cutting under water cleanly and quickly with a minimum of desiccation, and, second, coagulating under the same conditions so as to provide adequate hemostasis without extensive destruction of tissue.

Two such electrical generators have found favor among urologists thus far. One uses pliotron tubes, which produce a radio current of great frequency. This generator is made by the Comprex Oscillator Corp. of New York and bears the trade name of McCarthy Surgical Unit. The other utilizes a series of transformers and spark gaps to produce the high frequency current. This

*From the Department of Surgery, University of Michigan. Read before the Detroit Academy of Surgery at its Ann Arbor meeting January 14, 1932.

machine, known as the Davis-Bovie Electro-Surgical Unit, is manufactured by the Liebel-Flarscheim Company in Cincinnati. Each of the instruments has its champions, as does each of the electrical generators.

We have used both instruments and both generators and are at the present time employing both types of resectoscope in our work, using the Bovie Generator. No doubt the future will bring forth many refinements and changes in our present equipment.

With the resectoscope, one is able, under continuous direct vision, to excise any vesicle neck obstruction, be it scar contracture, carcinoma or hyperplasia of the prostate, with practically no loss of blood and with surprisingly little postoperative reaction. Either low spinal or sacral anesthesia is used. In most instances the latter is adequate.

We need not go into a discussion of operative technic in this paper other than state that all operators thus far using this method have found it an extremely difficult procedure technically. There are undoubted hazards attached to its execution which are not to be minimized. This procedure will never be successfully practiced by the occasional resectoscopist or persons unskilled in cystoscopy.

Davis, in May, 1931, reported his first two hundred cases without a serious postoperative complication or a postoperative death. Recent reports of his work have shown the same results in his next hundred cases. The fourth hundred included two postoperative deaths. Alcock at Iowa City in a recent personal communication reports six deaths in one hundred eighteen cases. He attributes this high mortality to the fact that many of his cases have been extremely unfavorable risks from every standpoint. Fifty cases done at the University Hospital since October have not resulted in any operative mortality. At least 25% of this group were distinctly unfavorable subjects for the hazards of prostatectomy and had previously been simply placed on suprapubic drainage.

The preparation of the patient for resection should in no way differ from that employed for prostatectomy. The principles enunciated a generation ago for the management of urinary obstructions, which rendered prostatic surgery relatively safe, have undergone no change.

Some glands of unusually large size have, in the hands of all operators, required two, or in some rare instances three, resections before adequate removal of obstruction was obtained. No attempt is made to remove all of the gland. As in suprapubic or perineal prostatectomy prostatic tissue is always left behind. Usually the resection of 10 to 20 grams of tissue is sufficient to completely overcome the obstruction. The operation in skillful hands generally requires from fifteen to sixty minutes, depending upon the amount of tissue to be removed. Following operation the patient is left on catheter drainage for a period of two to five days.

Postoperative reactions are infrequent, and in most instances surprisingly mild, considering the age and general condition of many of the patients, as well as the amount of pre-existing infection present in the majority of cases. Two patients in our series have had chills with fever following resection, becoming afebrile in each instance within 48 hours.

The period of hospitalization following operation has been greatly diminished by this procedure. The average in Davis' first two hundred cases was under a week. Our experience is that in favorable instances uncomplicated by old suprapubic sinuses, chronic uremia, or severe heart disease, patients are ready to go their way in from seven to ten days. Some have gone home on their fifth postoperative day.

The incidence of recurrence of obstruction has not been established. Davis reports six in two hundred over a four year period. Inasmuch as no other series covers over a twelve months period, further statistics are not at this time available. The 3% observed by Davis compares quite favorably with the instance of recurrence following suprapubic and perineal prostatectomy. Certainly from the patient's standpoint, reoperation by this method is much to be preferred to that of any other.

Our experiences thus far with this method lead us to conclude that it is safer than any other at our disposal for the relief of obstructions of the bladder outlet. It reduces the removal of the obstructing prostate to a minor surgical operation with the accuracy of a cystoscopic procedure. The decreased hospitalization is of more than minor importance economically.

Heretofore the dread of the really formidable procedures that have offered their

only hope of relief has deterred patients with beginning obstructive lesions from seeking their correction until in most cases irreparable damage incident upon chronic prostatism has taken place. With the relative safety and short hospitalization of the transurethral method one can reasonably expect that the time will soon come when men with these beginning obstructive lesions will fearlessly hasten to have them corrected.

SOCIOLOGICAL ASPECTS OF CONTRACEPTION*

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Never has there been a time in the history of medicine when the physician has been free from the confidential approaches of patients seeking information for the means of preventing conception and for relief from an unwelcome pregnancy. Due to a world-wide financial depression and its economic influences, this has become more noticeable and more evident at the present time. It is a question that is attracting the attention of civilization and has a trend toward making demands of physicians quite out of harmony with the standards of medical ethics. It has become a problem for careful consideration and serious study of legislators, jurists, statisticians, religionists and social workers, as well as of the medical profession.

Although concerning all humanity, it is essentially a woman's question. Needless to say it primarily emanates from the women themselves. By a process of evolution, women have emerged from a state of bondage imposed upon them by the customs of the savage and middle ages and have proclaimed their rights for equality of freedom in social, economic and political life. They are now demanding the right to control their own sex life and are propounding this question before the civilized world. We cannot deny them the opportunity of being heard.

Time will permit tracing the history only briefly. The first references made to the prevention of conception are found in Genesis. We learn that Onan was punished for spilling his seed upon the ground in order to avoid impregnating his brother's wife. In the book of Exodus the Mosaic laws state the penalties inflicted upon man for injuring a pregnant woman. Prior to the Christian era, the practice of abortion was common among the Greeks and Romans, but little was known as to their legal attitude in regard to it. Hippocrates forbids criminal abortion in his famous oath. The Greek philosophers, Plato and Aristotle, favored the practice. Aristotle's opinion may be compared to that of the modern advocates of birth control. He says, "When couples have children in excess and there is an aversion to exposure of offspring, let abortion be procured before life and sense have begun." He went so far as to recommend it where the population had exceeded certain assigned limits. This was reiterated by Malthus, 150 years ago, when he proposed deferred marriage as a remedy for overpopulation.

In the middle ages, occasional pronouncements were made from time to time by ecclesiastical authorities. The Church thought that the life of the child must not be sacrificed even for the mother's benefit. Abortion was regarded as an anti-social act contrary to the welfare of the individual and of the state, unless performed for an adequate medical reason. Among the primitive savage races, infanticide seems to be more common than abortion, probably because it was easier to accomplish. Particularly was this common among the American Indians. Tradition tells us of the various methods employed by barbarous tribes to interrupt pregnancy, such as the practice by Chinese women of driving nails into the gravid uterus in order to destroy the fetus, of beating the abdomen with paddles and of piercing the womb with long needles. All through the Christian era down to the pres-

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ent time, there is historical evidence to show that our ancestors were compelled to deal with the question of impregnation control in some form or other, the same as we are today. Their laws and mandates, their religious convictions and their writings all prove it.

At the present time civilization has entered a stage of ultra-evolution. By the advances in science, the influences governing our existence have been changed to a degree that they have affected us industrially, politically, economically, socially, religiously, morally and physically. This has necessitated a complete revision of our sociological standards. In the field of science, discoveries and inventions appear so rapidly that before we have become familiar with them a new one is announced. Health standards are improved and the span of life has been lengthened. Today, we are advocating health examinations, mental hygiene and eugenics. The trend is toward health conservation. The world is clamoring for enlightenment. Preventive medicine is now confronted, as it once was, with the contagious and communicable disease problem, with the vital question of race betterment and race control.

The factors which have brought this question before the world are female trends to cope with the physical, eugenic, social, moral and economic conditions affecting their sex, which are being demanded of them by the progress of civilization. It is an evolutionary movement, but it is being retarded by antiquated legislation, the influence of religious controversy and the indifference of the medical profession. However, comparatively rapid progress is being made, for some of the nations have revised their laws to conform to the trend of the times and there is every evidence of increased activity in others. Early statistics, now being collected, prove that the movement is gaining wide favor, as a worthy cause to womanhood.

The means by which the control, interruption and prevention of pregnancy are carried out are by contraception, abortion and more recently by permanent sterilization.

Contraceptive measures have been used for years by the upper classes, probably because of their intelligence and means of easily obtaining information. Even though there have been laws in practically every nation in the world forbidding the dissemination of contraceptive information, nevertheless it has been freely obtainable by those who have sought it. Contraceptives are generally condemned by the church and state, but they are widely sold in response to the laws of supply and demand. There is no better way of imagining the extent of this supply and demand than to ponder over the simple statement that one-fourth of the adult population of the world is concerned, at least twice a week, with the decision "to procreate or not to procreate." In the United States it is estimated that 62 per cent of married couples of childbearing ages are constantly unfertile—that is, that the wife is neither pregnant nor nursing a child. It is safe to say that this proportion of married population must quite evidently practice some form of impregnation control, else our national birth rate would be decidedly higher than it is at present.

France restricted her birth rate one hundred years ago, and fifty years ago Holland started contraception. The New York Obstetrical Society began to investigate it in 1923 and the New York Academy of Medicine and the American Gynecological Society approved a program of study in 1924. Later, lay organizations and philanthropists became interested. In 1929, there were twenty-nine birth control clinics in the United States, proclaiming the rights of women in the "Prevention of conception for medical, social and economic grounds." Today there are eighty-one located in seventeen states. All of us are familiar with the name of Margaret Sanger, the pioneer of the American birth control movement, who gained considerable notoriety some years ago as a martyr for the cause.

There are those who argue that knowledge of contraception increases immorality by offering protection against pregnancy to unmarried women, but the amount of harm is small compared with the preponderance of benefits to women deserving of consideration. Furthermore, women of unblemished virtue defend its cause and advocate it on the highest moral grounds. It has been said repeatedly that birth control will diminish the birth rate, but in such countries as Holland, Switzerland, and especially Soviet Russia, where it has already been in force for several years, there is no statistical substantiation of this statement.

Students of statistics freely claim that contraception is the greatest single factor in preventing illegal termination of pregnancy, in avoiding the complications of abortion, resulting in the death of the unfortunate woman, and in affording parents the right to limit their children to the number they can adequately provide for and the number that is consistent with the mother's health and strength. It should prevent large families among those who usually live in poverty. Birth control in this respect is preventive medicine.

In all civilized countries criminal abortion is forbidden by law, but unfortunately the laws are ineffective. Illicit abortion in the United States has been termed "The National Disgrace" and statistics seem to indicate that it is entitled to this name. A review of reports from sections of the nation shows that the death rate among unmarried women of ages 17 to 28 followed complications from abortion in estimated percentages ranging from 18 to 43. In married women it is estimated that 25 per cent of all pregnancies terminate before viability and of these one-fourth to one-third are criminally induced. In Michigan, in 1930 there were a total of 144 abortion deaths of which 119 were the result of septicemia. Does it seem unreasonable to assume that the majority of these were due to criminal interference? And, too, one must not lose sight of the fact that thousands of abortions require no medical attention.

An analysis of ninety questionnaires sent out by the Civic and Industrial Relations Committee of the Michigan State Medical Society to hospitals in the state reveals some interesting data, as follows:

	1929	1930
1. Number of Maternity Cases (at term)	23,406	26,590
2. Number of Maternal Deaths (among above)	142	156
3. Number of Infant Deaths (among above)	821	817
a. Stillborn (among above)	944	1,053
4. Number of Abortion Cases	1,711	1,999
5. Number of Abortion Deaths	132	137
a. Criminal	89	74
b. Therapeutic	29	39

The deaths among the abortion cases for the two years average 7.25 per cent, of which 4.5 per cent are criminally induced. There is no manner in which it can be determined accurately upon what grounds these abortions were induced, but certainly some of them must have been for social, economic, eugenic and moral reasons, as well as for purely medical indications. In such countries as Germany, Switzerland, Norway and Sweden, the women have agitated the question to such a degree that there is a decided trend toward permitting legalized abortion for economic, eugenic and social reasons. For ten years Soviet Russia has had legalized abortions and is the only country in the world where a woman has the right to request that abortion be performed for other than therapeutic indications. The Russian government has established well-regulated "abortaries" to which a woman may apply for aid and receive it, providing she is not more than three months pregnant, and can show a justifiable cause as to why she should be aborted. The experience there is that it takes the initiative from the criminal abortionist and shifts it to the legal channels of a modern hospital.

With this regulation in force the Russian birth rate has not been materially affected. The motives for abortion are: poor economic conditions, 48 per cent; desire not to have a child, 10 per cent; desire to hide pregnancy, 0.5 per cent to 4.1 per cent; various illnesses, 21.6 per cent; and the presence of a nursling in the family, 6.8 per cent. Extramarital pregnancy in itself is not a legal excuse for abortion in Russia, but it may be performed if one of the accepted reasons is present.

Other nations have taken cognizance of Russia's experimental attitude regarding abortions and are engaged in studying the question as it applies to their individual situation. Most of them frown upon legalized abortion and are more in favor of contraception as the proper procedure. However, in Germany, Dr. Julius Wolf, noted professor of political science, and Dr. Max Hirsch, famous gynecologist, both favor abortion. In an article, "Mütter oder Embryo," Doctor Wolf argues that "the present law is a survival of barbarism, emphasizing the misery of the woman who becomes a mother against her will and the great suffering caused by abortion brought about by charlatans." Both of these eminent scientists believe in abortion when the capacity of the mother to bear children is affected and for eugenic and economic reasons. As a whole, the ethical medical profession is strongly opposed to legalized abortion. It is unques-

tionably justified in taking this attitude, because of the concomitant moral and physical damages to humanity, which would result from injudicious application.

The value of permanent sterilization is generally admitted. Where there is need of preventing offspring among mental defectives, the ignorant, the vicious and brutal, and confirmed criminals, there is little contrary argument. A convincing example of this is the famous case report of Dr. F. Naville of Geneva. He gives the history of several consecutive generations of a family in which vagrancy, alcoholism, immorality, prostitution, imbecility, insanity and criminality were inherited characteristics. In five generations, consisting of 834 subjects descended from one mentally defective female, there were 181 prostitutes, 142 beggars and vagrants, 76 criminals, including 7 murderers, and 64 who had been imprisoned for various misdemeanors. From them there were 106 illegitimate children born. A total of 116 years in prison had been spent by them and 734 years of support had been given by the state, representing a cost of $1,200,000. The United States spends millions annually for institutional care of the insane, criminals and mental defectives produced from similar sources of ancestry. Our institutions at present are tremendously over-populated. And yet the "war between moral theology and expediency is destined to continue for many years to come."

What the future holds forth, no one can predict. The influence of science, religion and education has a definite trend toward revision of the legal, economic, eugenic, social and marital aspects of the whole question. The general drift is toward procreation of the healthiest type of human life. This means restriction of parenthood for the physically and mentally unfit; limitation of large families among those unable to conform to the normal economic bounds of the age in which we live; preservation of mothers and conservation of child health.

Science teaches us that nature has its own birth control laws, which exist throughout the whole plant and animal kingdom. Every species reproduces many more of its kind than can possibly survive. Religion is beginning to favor the demands of the movement, as is shown by the recent activities of regional groups of the Methodist Church. Education of the civilized world in science, eugenics and economics is the main factor for propelling the birth control movement to a successful end, and not the fanatic demands of selfish womanhood trying to avoid pregnancy. The latter will invoke the wrath of the Church and ultimately result in disastrous misunderstandings, leading to defeat of the cause.

It is the duty of the medical profession to point out the harmful as well as the beneficial effects of birth control upon the health of the prospective mother, and its influence upon civilization. Many of the present methods of impregnation control are in various degrees inefficient, unhealthy, contrary to the laws of the state and nation, injurious and dangerous. Why? Because they place the control of conception almost entirely in the hands of womanhood. Any recognized means of conception control should depend upon the revelations of modern medical science and should be governed by proper and up-to-date legislation. The medical profession and the state should work in harmony in determining the best scientific and legal procedures. Naturally, great responsibility rests upon the medical profession.

Scientific researches have a trend along biologic lines and the future may develop methods of contraception which eliminate any personal factor and prove more satisfactory. Guyer, McCartney and Mudd have reported upon spermatoxin for inducing temporary sterility. Recently, Kastromium and Kartashev of the Perm Institute in East Soviet Russia, Babadogby of Odessa, together with Schorakova, Kolpikof and Lalin have experimented upon one hundred women with serum prepared from the semen of the corresponding husband of each woman. These investigators are working on the theory that semen, biologically prepared and injected intra-muscularly into the wife, will render her temporarily sterile against her own husband. Such a method would place contraception in the physician's hands, make abortion unnecessary and subject the whole procedure to legal control.

A day may soon come when the world's population may be controlled by scientific factors and be limited to national apportionment. "Scientific birth control means scientific life." The whole question of impregnation control is the most pressing problem in forensic medicine today and the medical

profession should be the first to contribute the scientific facts, which will ultimately lead to the solution of this vital problem affecting civilization. It is a medical problem and the medical profession should become the leaders and controllers of it rather than let the general public supplant it.

The Michigan State Medical Society may well appoint a committee to study this question and make recommendations as to the governing regulations for birth control clinics in this state, four of which have already been organized.

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GALL BLADDER SURGERY IN THE AGED

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The mortality rate in gall bladder surgery is high. Four factors contribute to this. (1) An extreme toxicity often accompanies gall bladder pathology. (2) The anatomical relations in this region are complex, making cholecystectomy a formidable operation, especially if adhesions are present. (3) The bile ducts and blood vessels vary greatly in their courses in different individuals, the gall bladder itself often assumes an extraordinary, grotesque form, and may rest in a position wholly unexpected and inaccessible. (4) Shock is always severe, particularly so after operations in which the liver has been exposed and manipulated. So dangerous and difficult is gall bladder surgery that a timid surgeon may hesitate to operate, when an operation is plainly indicated. This is especially true in the case of the aged patient. The relatives may reason that the patient's span of life is short at best, so why subject her to a painful operation, if there is the least doubt about recovery. "Why not let the old patient die peacefully?" To this argument the inexperienced surgeon may yield. However, such reasoning is, as a rule, fallacious, for experience shows that the majority of these old people not only recover from the operation but often live without discomfort for years. Even if the patient be over three score and ten, an operation should not be denied her, if there is any chance of recovery.

The literature on gall bladder surgery is full of instructions for the preparation of patients before operation. I shall not repeat these, except to say that, when possible, all preparations should be carried out carefully and completely.

Attention to the anesthetic is of prime importance. Never use ether. Invariably, hypostatic pneumonia will follow its use. Spinal anesthesia, local anesthesia, gas-oxygen or ethylene are the anesthetics of choice. Spinal anesthesia has been the most successful in my cases.

The operation itself should be performed with the greatest gentleness and care. The highest qualities of the surgeon will be called into play. It is better to do too little than to do too much. One must not linger to explore the abdominal cavity as he would in the young and strong. Adhesions are not broken up unless menacing life. The appendix is not sought. To quote the late John B. Deaver, "Get in quick and get out quicker," though I seldom advise hasty operating. Lord Moynihan writes, "In gall

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stone operations in older people suffering from severe infections, that operation is most desirable which gives the speediest relief." What is not done is of more importance than what is done. Find the gall bladder, pack off gently, open, clean out and drain. This is enough. A small incision is all that is required.

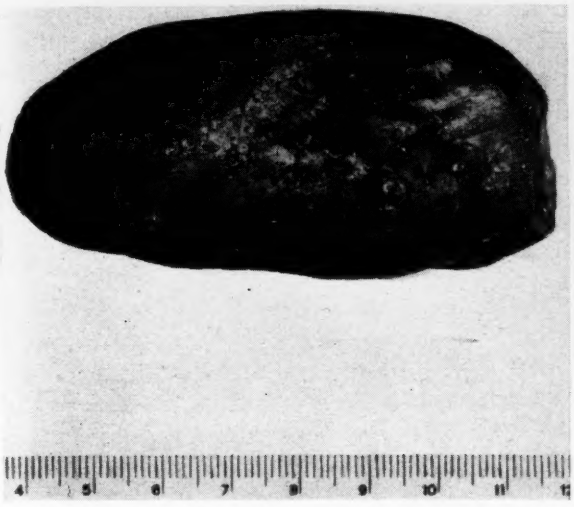

Fig. 1

When the patient is returned to bed, after reacting, she is immediately put up in a sitting posture. This is the chief position until ready to get out of bed. Abundance of fluids are given as soon as they can be tolerated, glucose is administered by mouth, by rectum and intravenously.

Two of my most interesting cases were women, each over 70 years old when operated upon. Their case histories are outlined as follows:

Mrs. T., aged 72, born in Germany, a small thin woman, complained of great weakness, indigestion and discomfort in the region of the epigastrium. Has always been active, although troubled with indigestion and abdominal pain, at intervals, for thirty years. Never had any serious illness and no former operations. Has four children, alive and well, husband dead. When seen she was in bed, very much depressed and slightly jaundiced. Her heart was slow, 60, and irregular. She was apparently very toxic. Abdominal examination revealed a tumor in the right epigastrium, below the costal margin, the size of a small fist, hard and tender. She had formerly been told that she had gall bladder disease and been advised to have an operation, which she had emphatically refused. When I saw her she was so sick that she requested an operation at once. Cholecystostomy was performed. The gall bladder was distended, its walls thin, filled with black fluid full of sandy particles. One stone, the size of a marble, was impacted in the region of the outlet of the cystic duct. She made an excellent recovery, leaving the hospital ten days after operation. She is now 79, active and well.

Mrs. McK., aged 73, born in U. S. A. I saw her for the first time in March, 1931. A large woman, in bed, in a semi-conscious condition. Had been in bed for three days, apparently very toxic. Husband alive and one adult child. Has had no former operations. Has had attacks of indigestion and abdominal pain at intervals since she was 38. Abdominal examination revealed the whole right side rigid and a mass could be outlined extending from the right costal margin downward to the brim of the pelvis. This condition had developed recently. The patient was slightly jaundiced and a diagnosis of ruptured gall bladder was made. At operation, the gall bladder was found not to be ruptured but was enormously distended. It was adherent to the transverse colon and contained six pints of black, gritty fluid. The largest gall stone I have ever seen was impacted down in the region of the cystic duct (Fig. 1). A rubber tube was stitched into the opening in the gall bladder; this tube came away of its own accord in ten days. The patient improved rapidly. Two weeks after operation, drainage lessened and a slight elevation of temperature was noted. On examining the drainage fistula, what seemed to be a plug of thick mucus filled the opening. When I attempted to remove this with forceps, to my surprise and chagrin, the whole gall bladder came easily away (Fig. 2). Nature had performed its own cholecystectomy. The patient was but little disturbed. Within a few days the temperature became normal again. She left the hospital three weeks after the operation and in four and one-half weeks all drainage had ceased and the wound was completely healed. At present, about nine months after operation, the patient is active and comfortable.

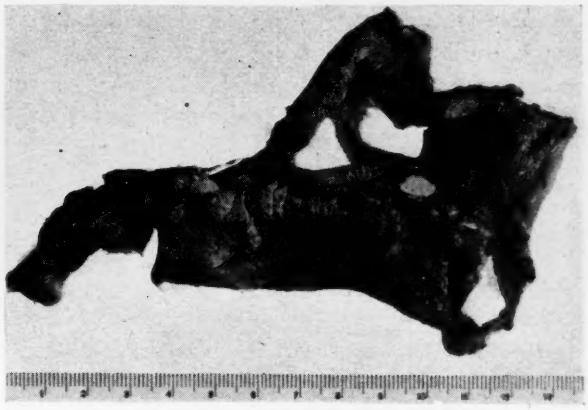

Fig. 2

In the past four years I have operated upon eleven aged patients for gall bladder disease. The oldest was 73 and the youngest 60. The average age of these eleven patients at the time of operation was 70 years. They were all females. One died five days after operation from pneumonia; all the others are still alive.

BONE GRAFTING: SOME FUNDAMENTAL PRINCIPLES*

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The foundation of our knowledge of bone growth and bone repair preceded any practical application of bone grafting. Belchier, Duhamel, Hunter, Hilton, Ollier and others had acquired a considerable knowledge of bone physiology and bone pathology but they did not realize the clinical possibilities of bone grafting because they lived before Lister had demonstrated that sepsis could be controlled. Rigid asepsis is one of the essential surgical principles upon which successful bone grafting depends. Sir Arthur Keith states: "He [John Hunter] had come as near as any man has yet attained to an understanding of the nature of living matter and of the conditions which are necessary for the successful implantation of a living graft amidst living tissues. We see he failed because of sepsis; sepsis ruined the brilliant programme he had conceived. If Pasteur and Lister had been born before him, he would have succeeded."

The grafting of bone to prevent and correct deformities and to assist the inherent recuperative powers of the human body to check or cure destructive bone lesions is now an established surgical procedure. Sir William Macewen of Glasgow first demonstrated the practical application of bone grafting. In 1880, he reconstructed the shaft of a boy's humerus which had been partially destroyed by osteomyelitis. The gap or defect of the humerus was bridged by homogeneous tibial bone grafts. The grafts fused with one another and with the proximal and distal fragments of the humerus and the function of the extremity was ultimately reestablished. Macewen's operation was successful because he applied the principles and conditions which determine the success of the grafting of bone.

At the present time the applications of bone grafting are varied and many and are essential for the remedy of many disease processes. The pathological conditions frequently requiring bone grafting operations may be outlined as follows:

1. Congenital and developmental defects of bone (congenital non-union fractures and spondylolisthesis).
2. Bone defects resulting from osteomyelitis.
3. Selected cases of fresh fractures.
4. Delayed union fractures requiring open operation.
5. Non-union fractures.
6. Bone defects resulting from resection of benign bone tumors.
7. Stabilization of joints (skeletal tuberculosis, infantile paralysis, fractures, scoliosis, and certain forms of arthritis).
8. To improve the mobility and stability of joints (infantile paralysis, spastic paralysis, and congenital dislocation of the hip).

Numerous surgical procedures and varying technics for the grafting of bone have been developed in recent years; however, there are certain principles common to all. The success of any one of the methods depends upon the recognition and proper application of the underlying principles which are to be discussed in this paper. The surgical and mechanical principles to be observed in bone grafting operations may be listed as follows:

1. Rigid asepsis.
2. Highest possible local resistance.
3. Highest possible general resistance.
4. Preliminary correction of soft tissue contractures and deformities.
5. Perfect hemostasis.
6. Minimum of surgical trauma.
7. Susceptibility of graft to external influences.
8. Autogenous grafts serve best.
9. Independent viability and osteogenetic properties of bone grafts.
10. Freshly denuded graft-bed.
11. Firm contact between graft and graft-bed.
12. Complete immobilization until solid bony union between graft and graft-bed.

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13. Grafts must be subjected to physiological stresses and strains which stimulate the activity of the osteoblasts.

Asepsis is properly placed first in the list of principles because of its great importance. The laboratory experiments of bone transplantations found no practical application until after the advent of aseptic surgical technic. Sepsis, complicating a bone grafting operation, favors a surgical disaster. The chapter in the history of medicine on "bone transplantation to remedy bone" was not and could not have been written before the time of Lister. Bone grafting should never be done in the presence of active infection. The history of a previous infection in the field of operation always makes the forecast as to the result of the bone grafting procedure uncertain. A previous infection of the bone or soft tissues although quiescent for a period of months or years may become active following the surgical treatment.

As a rule, bone grafting operations are delayed for a period of at least six months after any active infection in the field of operation. However, there is no safe clinical test to determine the postoperative course whenever a previous infection existed. Bone grafting operations require a rigid observance of the Listerian principles. Scrupulous aseptic technic should always be used. The skin should be excluded from the operative field. The gloved hand and instruments which enter the wound should never touch the skin. The minimum of talking is an important factor. There should be great respect for all soft tissues and the technic employed should result in the minimum of surgical trauma.

Since bone grafting operations are of election and not of emergency, every effort should be made to establish the highest possible local and general resistance. The integrity of the circulatory and neuromuscular systems is of particular concern locally.

Edema, sluggish circulation and diminished muscle tone are condition which are frequently present in the field to receive the transplant. These conditions can be favorably affected by proper forms of physiotherapy, including elevation, heat, massage, contrast and whirlpool baths and active muscular contractions. Preliminary grafting of skin may be necessary to prepare the field if pressure ulcers or extensive scar tissue exists. Correction of soft tissue contractures and fixed deformities preliminary to the bone graft operation is often necessary. Contracture deformities with loss of function of the foot, knee, hip, spine, shoulder, elbow, wrist and hand are conditions which must receive proper consideration before bone grafting. The integrity of the soft tissues controlling the joints proximal and distal to the field of operation should be reestablished if possible in order to restore function of the joints, anatomical relations and normal weight bearing lines.

Contracture of the quadriceps muscle resulting in partial or complete loss of knee joint function frequently complicates nonunion fracture of the femur and tibia. This deformity may be considered briefly for illustration of the above principle. If the contracture is not remedied before bone grafting for the non-union, then, as a result of the surgical trauma and prolonged period of complete immobilization in plaster, the contracture increases and may result in a fixed and permanent disability of the knee joint. Quadriceps contracture may frequently be entirely corrected by proper forms of physiotherapy. Recurrence of the contracture during the period of postoperative immobilization in plaster can be prevented to a great degree by instructing the patient to actively contract the involved muscle at stated intervals. Soft tissue contractures respond favorably to various forms of properly applied physiotherapy, which includes heat, contrast and whirlpool baths, massage, active muscular contractions under water, swimming and stretching exercises and also by mechanical apparatus such as adhesive traction, wedging plaster of Paris casts, banjo splints, and other special forms of apparatus. Open operation is occasionally necessary to correct deformities which do not respond to the more conservative measures.

Perfect hemostasis and the minimum of trauma during the operation are obvious surgical principles and should not require special mention. The use of a tourniquet is not essential in any bone grafting operation and, in fact, its use is contraindicated. A tourniquet may be the cause of a delayed postoperative hematoma, the presence of which may require a second open operation which increases the incidence of postopera-

tive infection. A hematoma favors a suppurative process which is often disastrous in bone grafting. Blood clot between graft and graft-bed interferes with fusion. Oozing from the graft-bed should be controlled before implantation of the graft. The minimum of surgical trauma is obtained by the use of proper anatomical dissections for the exposure of the field of operation and by careful subperiosteal development of the bone to receive the graft. The use of motor driven instruments as perfected by Albee will do much to minimize the surgical trauma to bone and soft tissues.

The free detached bone graft should be treated as a delicate tissue and any factor which interferes with its vitality should be avoided. The graft should be kept moist with normal warm saline and should never be permitted to become dry. It should never be crushed with forceps and should not come in contact with chemicals which could destroy the living cellular elements.

Two surgical teams may work together, one preparing the receiving field and the other developing the graft to be transplanted. If the two-team method is not possible, then the graft-bed should be developed first, whereby the graft can be transferred directly to the graft-bed, thus eliminating some of the dangers of external influences.

Autogenous grafts serve best. This fact has been definitely established by numerous laboratory experiments and by surgical experience. It is highly probable that one can explain the fact that auto bone transplantation is more successful than homo or hetero transplantation on the basis of our knowledge of tissue compatibility. Transfusion of blood is, in fact, a form of tissue transplantation. Landsteiner demonstrated the presence of iso-agglutinins in human blood and found that individuals fell into several different groups. There is, normally, a constant compatibility between an individual's blood serum and his own blood cells and also with the blood cells of certain groups of his own species. Incompatibility exists between the humand blood serum and the blood cells of other species. Probably there is a relation between the phenomena of blood compatibility and bone compatibility. Transplantation of less differentiated tissues as fascia and bone is attended with much greater success than the transplantation of the highly differentiated tissues whether dealing with auto, homo, or hetero transplantation. It is also a well known fact that homo transplantation has a considerable degree of success in the lower forms of animal life and hetero transplantations are highly successful in the plant kingdom. Homoplastic bone grafts, or those derived from another human individual, may be used successfully, though not with the same certainty of success as autogenous bone grafts. Fortunately, the adult human skeleton is so constructed that certain portions may be removed for the purpose of serving as grafts without jeopardizing any of its functions. Autogenous bone grafts are practically always available in the adult. However, in infants and young children it may be unwise to obtain the graft from their own skeleton, particularly when massive bone grafts are desired. In such instances, an adult member of the child's family may act as a bone donor. A portion of the shaft of the tibia and fibula, one or both tables of the wing of the ilium and ribs are the usual sources for obtaining bone grafts without danger of resulting disability or loss of skeletal function.

Human homoplastic bone grafts are used successfully because bone is one of the less differentiated and lower orders of tissue. Human homoplastic transplantations of the highly specialized tissues results in failure.

Living tissue removed from the organism and completely detached from nerve and blood supply may live and grow in normal warm saline solution. This period of independent viability is a characteristic of all transplants and is true of all tissues of the lowest and highest species. The period of independent viability varies considerably with the various tissues of the organism. Epidermis and periosteum may remain viable for a period of two or three weeks or longer, whereas the period of independent life of nerve or liver tissue is very short. One important factor which determines the period of independent viability is the size of the tissue transplanted. A massive bone graft has a much smaller surface area in contact with the medium which supplies the source of nourishment than the same graft separated into a multiplicity of smaller fragments or chips. The multiple bone chips have a greater surface area in contact with the nutritional medium and it is reasonable

to believe that the period of independent life and growth of the chips is greater than in the massive graft. The blood serum and lymph surrounding the bone transplant are the sources of nourishment of the graft until it becomes re-vascularized. Codivilla first called attention to the great osteogenetic powers of osteo-periosteal grafts. Both massive and small bone grafts become re-vascularized during the period of independent viability and growth but the osteogenetic power of the smaller chip grafts is greater than that of the massive graft, as often demonstrated by surgical experience. A massive graft, because of its size, possesses a mechanical strength which is often a desirable feature. The combination of a massive graft and multiple bone chips or shavings, because of greater mechanical support and greater osteogenetic properties, respectively, forms the ideal procedure in the majority of bone-grafting operations.

A freshly denuded graft-bed and firm contact between graft and graft-bed are principles which surgeons recognize in the transplantation of all tissues. Early re-vascularization, continued viability and firm uninterrupted fusion between graft and graft-bed are the conditions which result from observing the above principles. Solid, bony union between graft and graft-bed results within a period of about one month when the graft is well contacted with a freshly denuded graft-bed. Albee states that, "The most important rule of the process of grafting in the vegetable kingdom is the contacting of the alburnum of the scion or graft to the alburnum of the stock, or the part grafted. The contacting of the corresponding histological layers is not of such paramount importance in the grafting of bone as it is in vegetable life, but the importance of its observation is unquestionable." Surgical experience does not support Albee's statement, since excellent results are obtained with massive on-lay grafts and with multiple bone shavings placed in contact with the denuded surface of the cortical bone. Surgical experience has also demonstrated that periosteum is not essential for successful bone grafting. The majority of the bone grafts used in our clinic are periosteal free. The shaft of the tibia, when used as the source of a graft, is exposed subperiosteally. The developed graft consists of cortical bone and endosteum, each containing large numbers of the specific osteogenic cells.

Successful bone grafting depends upon the principle of subjecting the graft to the physiological stresses and strains which stimulate the activity of the osteoblast. The grafts which Ollier implanted beneath the scalp and amongst muscles were gradually absorbed. He did not realize the importance of a principle which Murphy expressed when he stated that, "The amount of growth in a bone depends upon the need for it."

Transposition of the fibula to bridge a defect of the shaft of the tibia serves as an excellent illustration of this principle. The transplanted fibula is subjected to the physiological stresses imposed upon the tibia. The fibula hypertrophies and gradually approximates the size and shape of the normal tibia because, as Wolff has stated, "Every change in the form and the function of a bone or of their function alone, is followed by certain definite changes in their internal architecture, and equally definite secondary alterations in their external conformation, in accordance with mathematical laws."

Hunter attributed a form of "consciousness" to living bone. Grafts which the body does not need and grafts not subjected to muscular stresses and strains are gradually absorbed.

This principle may be observed when one studies the gradual but ultimate fate of bone fragments in comminuted fractures which are displaced in the soft tissues and removed from physiological stress and strain. The loose fragments, disconnected anatomically and physiologically from the skeleton, gradually become absorbed.

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APPENDICITIS UNDER TWO YEARS

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The unexpected finding at autopsy of a gangrenous appendix in an infant of eighteen months who had for a period of nine days been suffering from nausea, vomiting and watery green stools, emphasizes the difficulty of diagnosis of acute appendicitis during the first two years of life. The literature records so relatively few cases of acute appendicitis in patients under two years, that it seems worth while adding another case together with a brief discussion of the condition. While statistics seem to prove the rarity of the condition during this age period, it is probable that the diagnosis of acute appendicitis in infants is often missed, it being made only in the more typical cases.

Baby R., male, 18 months old, previously well, was suddenly taken ill June 13, 1931, with vomiting. Then followed the passage of watery green stools so that the child entered the hospital with a diagnosis of gastro-enteritis. After admission to the hospital the loose green stools continued but never more than three stools in the twenty-four hours. Vomiting persisted and the child became drowsy and stuporous from the acidosis and toxemia. Leukocyte count was 17,850, polymorphonuclears 79 per cent. The urine showed moderate amounts of albumin and acetone. Temperature was never over 102.8 degrees. When seen by the writer in consultation on June 21 (8th day of the disease), the child presented the picture of extreme acidosis, *i.e.* deep stupor, dilated pupils, hypernea and odor of acetone on the breath. The acidosis seemed to be accounted for by the fact that the child had been kept on barley water for a full week, very little of which had been retained. The absence of muscle spasm and undue abdominal distension coupled with the history of gastro-intestinal disturbance of several days standing seemed to make the diagnosis of gastro-enteritis with acid intoxication quite certain. Glucose and saline were given to relieve the acidosis, but on the following day the baby died. Autopsy findings were reported as follows: "On opening the abdomen a large quantity of pus escaped. The intestines are distended and portions of the loops are fastened together with fibrinous exudate. The appendix is necrotic and there is a rather large perforation near the base. A fairly large concretion lies free in the abdominal cavity."

DIFFICULTY IN DIAGNOSIS

There are several reasons for failure to recognize acute appendicitis in infants. In the first place these little patients are so frequently subject to temporary or functional gastro-intestinal disturbances, and vomiting and fever are so common in the onset of many diseases other than abdominal, that the doctor is apt to trust to the law of chance rather than to go thoroughly into the history and make a careful examination. Abdominal palpation and in suspicious cases white and differential counts should be routine in all cases suggesting abdominal pathology. There is, of course, the admitted difficulty in making a careful abdominal examination on patients of this age. In this connection the importance of rectal examination and examination under light anesthesia are to be remembered.

In the second place the disease usually runs a course different from that in adults. It is more insidious. There are fewer positive symptoms and a greater tendency to general septic peritonitis with little previous warning.

Thirdly the atypical location of the appendix in some infants makes diagnosis more difficult, but perhaps the most important cause of missing the diagnosis is our failure to consider it as a possibility. As Howland[1] so well says in his paper on this subject, "The primary requisite for the diagnosis of a disease is the appreciation that it may possibly be present." When an adult develops acute abdominal pain with vomiting and fever he tells the world, including the doctor, about it, and the first thing considered is appendicitis. When an infant develops a similar condition, about the last thing that is thought of is appendicitis, and all too often a careful examination is not made until perhaps too late in the disease. In dealing with abdominal pain, vomiting and fever at any age, a safe rule would be to assume that the appendix is involved, and then to proceed to verify or rule out the suspicion.

INCIDENCE DURING FIRST TWO YEARS OF LIFE

How frequently does appendicitis occur during the first two years of life? This question may be answered by a study of the age incidence of 500 cases of appendicitis, occurring during the first twelve years of

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life reported at the Edinburgh Children's Hospital.[2] In this series of 500 cases there were only three in infants under one year while in the second year there were eleven cases, nearly four times the incidence of the first year. From a study of this curve one would conclude that the disease is very rare during the first year but thereafter the condition becomes progressively more common each year until about the eighth, after which it seems to maintain about a uniform rate up through the age of puberty and early adult life.

Holt considers appendicitis exceedingly rare in infancy, the condition having never once been found in about 2,000 autopsies, nearly all upon children under two years in three institutions with which he was connected. He speaks of having seen clinical cases once at nine months and once at fourteen months, and quotes a case of Gayen's in an infant only six weeks old, one of Shaw's and one of Demme's each at seven weeks and Savage's at nine weeks.

Deaver[3] states that 15 per cent of all cases occur under the fifteenth year, of which but few are under the fifth year.

Abt[4] in 1917 searched the literature and was able to find only eighty cases in infants under two years.

Morse[5] is inclined to believe that appendicitis is not as uncommon in infancy and early childhood as is usually believed and that the apparent rarity in early life is because, on account of the indefiniteness of the symptoms and the difficulty in their recognition, it is usually overlooked unless perforation occurs and general peritonitis develops.

In order to get more definite information regarding the frequency of appendicitis during infancy, letters were written several of the large children's clinics of this country requesting a statement of their experiences. The following reports were obtained.

Brennemann of the Children's Memorial Hospital, Chicago (June 27, 1931), recalls having seen but one case under two years of age and concludes by saying that appendicitis is either extremely rare in infancy or else it is not diagnosed. He believes that the condition most likely is extremely rare.

Julius Hess in a communication (July 10, 1931) states that of 193 cases of appendicitis operated at Sarah Morris Hospital, Chicago, during the last three years, there was only one case under two years. In addition to this single case, during this same period of time, Hess had six cases of general peritonitis in children under two years of age, where the source of penetration through the intestinal tract was unknown. Possibly some of these may have had a primary seat in the appendix, but it is more likely that these were cases of primary peritonitis resulting from blood stream infection with such organisms as the streptococcus, pneumococcus and influenza bacillus. This type of case presents an added problem since they usually respond so poorly to surgical treatment, some observers feeling that when the diagnosis of primary peritonitis is made the case should be handled medically. However this may be, until we have some more definite means of differentiating between primary and secondary peritonitis it is likely that the best of medical and surgical opinions will find it expedient to continue to operate practically *all* peritonitis cases, for fear of withholding the advantage of drainage from some case that needs it. Primary pneumococcic peritonitis as described in pediatric literature is most often seen in older children and so is not dwelt upon in this paper.

Cutler of the Boston Children's Hospital in a letter dated July 2, 1931, states that of the 300 cases which he has personally operated in that hospital, there were no cases in the first year of life and six cases in the second year. His records showed the incidence to increase rapidly after the first year, reaching a more or less stationary level at about the time of puberty. During the first five year period Cutler had 106 cases with seventeen deaths—a mortality of 16 per cent. The mortality after five years was seven deaths in 194 cases or only 3.6 per cent. These figures bear out so well the greater risk in dealing with appendicitis in early life.

From the University of Michigan, Parsons replied that in the past six years four cases under two years of age had been seen.

Marriott of the St. Louis Children's Hospital, on July 9, 1931, replied that during the last two year period the diagnosis of appendicitis had been made, either antemortem or postmortem, on 201 children. Of these, only three were infants under two years. In two of the three the appendicitis was the primary condition; in the third, a complication of intussusception.

REASONS FOR LOW INCIDENCE

The low incidence of appendicitis during the first two years of life is supposed to be partly due to the relativelv *small amount of lymphoid tissue* present during that period. After the second year the lymphoid tissue begins to increase in amount and to extend until it reaches the maximum of its development about the twentieth year. It is generally accepted that the greater the amount of lymphoid tissue, the higher are the possibilities of infection. A second factor which may play a part in making young children less susceptible to appendicitis is the fact that the toxicity of the intestinal flora alters as the child grows older. In the majority of instances B. coli is the organism responsible for the infection, and it is an organism which displays the most remarkable variation in virulence. Soon after birth, when intestinal digestion first begins, its virulence is comparatively slight, but as the child grows older the organism becomes more virulent, the increase being stimulated by the greater complexity of the diet and possibly by incidental attacks of gastro-enteric disturbance. Also, the appendix of the infant when compared to that of the adult is *relatively larger* in proportion to the body, and is *considerably* larger in proportion to the alimentary canal. This fact of the larger organ together with a more funnel shaped opening from the cecum promotes better drainage into the cecum.

HIGH MORTALITY DURING INFANCY

While the above mentioned factors seem to result in a low incidence of appendicitis during the first two years of life, it is a well known fact that the mortality rate is especially high during this period. This may be explained by the thinness of the appendiceal wall, the small, poorly developed omentum, and the less definite parietal fixation of the intestinal loops, all of which provide less chance of walling off the infection, and permitting the early development of a generalized peritonitis. In addition to this, young children tolerate all septic infections particularly badly. In many children the meso-appendix is very short, leaving that portion of the appendix which extends beyond it deficient in vascular supply. Also there seems to be a lesser tendency to the formation of protective adhesions and the adhesions are more delicate and easily torn.

SYMPTOMS

The symptoms of acute appendicitis are *essentially the same* in infancy and early childhood as later. The difference in the symptomatology lies in the difficulty in recognizing these symptoms. It is probable that pain is one of the earliest symptoms, as in adults, and it probably may be either dull or colicky. Of course infants, while able to show they have pain, cannot indicate in any way where it is. *Vomiting* is also a very constant symptom and its absence practically rules out an appendiceal lesion. It may or may not precede pain. There is nothing characteristic about the vomiting. Constipation is more common than diarrhea, but either condition may be present. There may or may not be moderate distension of the abdomen. The temperature is usually not much elevated. It may be nearly normal. If it is over 103 the difficulty is probably not appendicitis. There is almost always a polynuclear neutrophilic leukocytosis which may be slight, moderate or marked. Morse states that in his experience it has made very little difference either in prognosis or treatment as to how high the white count is. If the child is not in a serious condition and there is no leukocytosis, the chances are much against appendicitis. If the child is in a serious condition, the absence of leukocytosis does not count against appendicitis. The course of appendicitis is much the same in early life although changes are likely to occur more rapidly. General peritonitis may develop either with or without perforation. Perforation and peritonitis may come on insidiously or in the course of a few hours. With infants the symptoms of peritonitis are more likely to manifest themselves in an insidious manner and thus be overlooked.

PHYSICAL SIGNS

Regarding physical signs, tenderness at McBurney's point, if it can be elicited, is of diagnostic importance, but the appendix in childhood frequently lies deep so that tenderness and muscle spasm may be greater on the left than on the right side, or it may be deflected upwards. Where there is palpable resistance on the right side, in the presence of other symptoms, the diagnosis of appendicitis is to be strongly suspected. Rectal examination and if necessary examination under light anesthesia are mentioned again as often being helpful.

DIFFERENTIAL DIAGNOSIS

So far as differential diagnosis is concerned, suffice it to say that the condition is often confused with intussusception, intestinal obstruction, pleurisy, pneumonia, gastro-enteritis, pneumococcic peritonitis and other less common conditions associated with pain referable to the abdomen.

CONCLUSIONS

1. The possibility of appendicitis should be kept in mind regardless of age.
2. Appendicitis is a rare disease in the first year of life, somewhat more frequent in the second year, and gradually increases in frequency during the years of early childhood and young adult life.
3. Owing to indefinite symptoms, difficulty of careful abdominal palpation and failure to have the condition in mind, it is likely that many cases go undiagnosed during the first two years of life.
4. Abdominal palpation, together with white and differential blood counts, should be routine in all cases with symptoms of vomiting or abdominal pain. Rectal examination and examination under light anesthesia may be useful aids in making the diagnosis.

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THE REHABILITATION OF PATIENTS WITH INFANTILE PARALYSIS*

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The care of infantile paralysis illustrates in the fullest possible way the principles underlying orthopedic surgery, for in it attention must be paid to the prevention as well as treatment both of loss of function and of deformity in the locomotor apparatus.

In considering rehabilitation a distant view into the future has to be taken, a long campaign of treatment may have to be planned. Everything depends upon the early recognition and treatment of paralyses for which detailed anatomical and physiological studies are necessary. At the first possible moment, then, every case should be under the observation of an orthopedic surgeon. In planning for the future, assistance will be sought under the following heads:

1. The natural recuperative power of the locomotor system.
2. The proper application of physical therapeutic measures.
3. Retentive apparatus necessary for the prevention of deformity and for the more ready return of function.
4. Surgical procedures for reconstruction in late cases.
5. Psychological help through intelligent guidance and education.

In infantile paralysis the interest of the orthopedic surgeon commences with the onset of the disease, even in the preparalytic stage. In the *acute stage* (where there is paralysis with muscle tenderness), the most important orthopedic requirement is rest. Painful paralyzed muscles must not be stretched or otherwise irritated. One must, therefore, guard the patient from such influences as gravity, vicious bed posture, the overaction of unparalyzed muscles and such misguided attention as electrical stimulation, osteopathy, chiropractic or physical therapy.

Paralyzed muscles must be relaxed. This means, for example, that if a muscle is a flexor of a joint, that joint must be held in flexion to give the muscle the best chance of recovery. Where single muscles are paralyzed it is easy to maintain such an optimum position, but where many muscles are involved a careful selection of joint positions must be made in order to concentrate upon getting return of function of the most important muscles. In general it may be stated that those muscles most concerned with opposition to the influence of gravity are the ones to which most attention must be paid. In the accompanying chart, a list is given of the chief joints and the positions in which they should be placed, in cases where there

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CHART NO. 1.

THE OPTIMUM POSITIONS FOR THE RETURN OF FUNCTION IN EXTENSIVE PARALYSES:

JOINT	POSITION	MUSCLES CHIEFLY RELAXED
Shoulder	Abduction 90°	Deltoid
	External rotation 90°	Supra and infra spinatus
Elbow	Flexion 90°	Biceps and brachialis
Forearm	Supination full	Biceps and supinator
Wrist	Extension 40°	Extensor carpi rad. l. & b. Extensor carpi ulnaris
Fingers	Semiflexion (grasp)	
Thumb	Opposition	Thenar muscles
Spine	Recumbency with small support under lumbar region	
Hip	Abduction 45°	Gluteus medius
	Rotation neutral	
	Extension and flexion neutral	
Knee	*Almost* full extension (5° flexion)	Quadriceps
Ankle and foot	Dorsiflexion to 90°	
	Neutral as to inversion or eversion	
	Arches supported	

is extensive paralysis of opposing muscle groups.

ANATOMICAL AND PHYSIOLOGICAL EXAMINATION

Before these positions can be decided upon, it is necessary that exact knowledge of the extent of involvement of the muscular system be determined. A detailed examination of muscles is made and is charted. Against each muscle on the chart is listed an estimate of its function, the criterion being its ability to act with or without the help of gravity. In the earliest stages this examination may be only approximately accurate on account of severe muscle tenderness. The extent of tenderness will give important clues as to the position in which the limbs are to be held and more accurate determination postponed until its subsidence.

METHODS USED FOR THE RETENTION OF THE OPTIMUM POSITIONS FOR THE RETURN OF MUSCLE FUNCTION

Every patient with acute anterior poliomyelitis must be in bed, and where there are extensive paralyses the positions already described may be temporarily maintained by very simple means. A bandage may be tied in a clove hitch around the wrist and the latter held to the head of the bed with the palm upwards and the fingers and thumb bandaged around a ball. This will take care of the upper extremity. The legs may similarly be tied to the sides of the bed, small pads resting under each knee, and the feet supported with pillows. The weight of bed clothes should be removed by cradles. More satisfactory apparatus must be provided as soon as possible. Where there is severe muscle pain it may be necessary to apply a plaster mould. A bilateral hip spica is a very good method of relieving pain and holding position in the lower extremities. This may be bivalved and as soon as the tenderness begins to disappear the patient may be immersed in warm saline baths.

To facilitate nursing and to add to the comfort of the patient, the use of the Bradford frame as an adjunct to fixation is to be recommended. This is made of 1″ gas piping, is 6″ longer than the patient and is a little wider than the distance between the anterior superior iliac spines. Canvas is stretched across this metal frame in two sections leaving a gap at the level of the perineum 4 or 5 inches in width. The patient lies on his back on this frame, which is supported on wooden blocks. The arms and any overhanging apparatus are supported at the side with pillows. A similar anterior frame may be used so that the patient can be turned onto his face.

During the acute stage parts of the body that are not affected should be exercised under careful supervision and the patient given reassurance—this is especially important in the case of older children and adults.

THE SUBACUTE STAGE

As soon as muscle tenderness has gone, the stage of spontaneous recovery or subacute stage commences. It is at this time that the greatest value is to be obtained by physical therapeutic measures. During this period the same positions must be maintained that have already been described as the optimum ones for the return of func-

tion. A state of physiological rest is assumed by the patient, recumbency is maintained, all joints are mobilized, massage and muscle stimulation are employed, but, except for the regulated periods for treatment, apparatus is still kept in place in order to guard weakened muscles. Throughout this time educational and occupational recreation is of paramount importance.

One measure of the greatest therapeutic importance should be singled out for more detailed mention and that is hydrotherapy. The most readily available is the domestic bathtub; in addition, specially constructed swimming pools are used in some centers to great advantage. Water, especially if made hypertonic by the addition of salt, has a buoyancy that supports the limbs and enables movements to be carried out by weak muscles that would be impossible out of the water. This is an important thing in the earlier stage of muscle return, as the stimulus of movement is of great help in the reformation of the reflex arc that has been broken down. The beneficial action of heat may readily be combined with the brine bath—so that while muscles are acting their blood supply is increased by the improved circulation that is produced throughout the limb. At this point it is worth remarking that peripheral circulatory disturbances are very commonly present in infantile paralysis. We are all familiar with the cold blue extremities so frequently seen in the chronic stages of the disease. A large amount of this diminished circulation in a paralyzed limb is no doubt due to diminished muscle function and therefore lowered demand for blood supply—in other words due to inertia. A factor that would seem to have been largely overlooked, however, is the probable involvement by the infectious process of the nerve centers in the spinal cord affecting the sympathetic nervous system and its control of arterial pressure. Some such circulatory change may well be responsible for some of the periarticular contractures that occasionally develop so rapidly and insidiously during the acute stage of the disease. Cases may rarely be seen in which contractures and deformities develop that are quite unexplainable by the local muscular paralysis and which may closely resemble the changes seen in atrophic polyarthritis—a fact that may lend support to the view that some cases of polyarthritis have a large etiological factor in neurovascular disturbances. Further discussion of this point is out of place at the present time and the subject is only mentioned as a suggestion for future work and to emphasize the important part played by circulatory disturbances in poliomyelitis and to stress the value of the therapeutic warm brine bath.

It is during the subacute stage that deformities must be prevented. While a few cases may develop periarticular contractures as just described, the most common cause for deformity is undoubtedly disturbed muscle balance; joints being pulled into fixed positions by unopposed active muscles. A drop foot or a flexion-abduction deformity of the hip may produce profound disturbances of the entire body mechanism. These deformities are practically entirely preventable if the points in treatment already discussed have been adequately attended to.

The only operative work that is necessary in the subacute stage is for the correction of such deformities that have been allowed to develop. Many of such deformities can be taken care of by simple manipulative methods, though occasionally a tenotomy may have to be performed.

TREATMENT OF THE CHRONIC STAGE

While much of the treatment in the acute and subacute stages must be left in the hands of the pediatrician and general practitioner, the chronic stage calls for all the ingenuity and skill that the orthopedist may bring to the problems that have to be faced. The procedures available fall roughly into three groups:

1. The correction of deformities
2. Stabilization of joints
3. Restoration of muscle balance around joints

The correction of deformities.—By the simple means of manipulation with or without anesthetic many soft tissue contractures may be overcome and correction maintained in plaster or other apparatus. For the more persistent conditions tenotomies and capsulotomies may have to be carried out. Structural bone changes in response to altered muscle function or other mechanical changes are not uncommon; such bony deformities may need correction by osteotomy, as for example in the knee for the correction of genu valgum. Atrophy of a limb with marked shortening is a deformity that

CHART NO. 2

UNIVERSITY OF MICHIGAN

UNIVERSITY HOSPITAL

INFANTILE PARALYSIS CLINIC

Name *John Doe* Number *999999* Date *August 30, 1931*

Cannot Walk | Walks unaided | With braces | Crutches | Corset

Characteristic gait *Acute case brought to hospital on stretcher*

Scoliosis *None*

Left	Contractions and Deformities	Right
	Hip	
None	Ankle	*None*
	Knee	

N	Facial	Orbit	*2*
N		Mouth	*0*
N	Anterior Neck		*N*
N	Posterior Neck		*N*
N	Back		*N*
N	Quadratus Lumborum		*N*
0	Anterior Abdominals		*0*
5	Lateral Abdominals		*N*
Left Leg			Right Leg
0	Gluteus Maximus		*1*
N	Hip Flexors		*1*
N	Tensor Fasciæ Latæ		*N*
3	Hip Abductors		*0*
1	Hip Adductors		*N*
0	Quadriceps		*1*
N	Inner Hamstrings		*N*
N	Outer Hamstrings		*N*
0	Gastrocnemius		*N*
N	Anterior Tibial		*0*
2	Posterior Tibial		*4*
N	Peroneals		*N*
N	Extensor Longus Digitorum		*N*
N	Extensor Proprius Hallucis		*N*
N	Flexor Longus Digitorum		*N*
N	Flexor Brevis		*N*
N	Flexor Longus Hallucis		*N*

Measurements Length

No change Atrophy

Advice *Lt. Hip in abduction and extension* *Rt. Hip in abduction*

Knee in almost full extension *Knee in almost full extension*

Foot in plantar flexion *Foot in dorsiflexion and varus*

Bilateral hip spica of plaster

Bradford frame

CHART NO. 3

INFANTILE PARALYSIS CLINIC

Name *John Doe* Number *999999* Date *August 30, 1931*

Left	Contractions and Deformities			Right
	Shoulder			
	Elbow			
	Wrist			
	Fingers			
Left Arm	Anterior Deltoid		*0*	Right Arm
	Posterior Deltoid		*0*	
Upper		Upper	*N*	
Middle	Trapezius	Middle	*N*	
Lower		Lower	*N*	
	Serratus Magnus			
	Rhomboids			
	Latissimus Dorsi		*N*	
	Clavicular Pectoralis Major			
N—Normal	Sternal Pectoralis Major			
1—Acts against gravity and	Outward Rotators		*0*	
resistance	Biceps		*0*	
2—Acts against gravity but not	Triceps			
against resistance	Supinator Brevis			
3—Acts only if gravity is removed	Pronators			
4—Contracture of muscle insufficient	Flexor Carpi Radialis			
to move joint when gravity	Flexor Carpi Ulnaris			
removed	Extensor Carpi Radialis			
0—Complete loss of function	Extensor Carpi Ulnaris		*N*	
	Flexor Profundus Digitorum			
	Flexor Sublimis Digitorum			
	Finger Extensors			
	Lumbricales			
	Dorsal Interossei			
	Palmar Interossei			
	Opponeous Pollicis			
	Abductor Pollicis			
	Thumb Flexors			
	Thumb Extensors			

No paralysis on left side.

Measurements Upper Arm

Lower Arm *Metal abduction brace for right upper extremity. Shoulder, 90° abduction, 90° ext. rotation; Elbow, 90° flexion; Wrist, dorsiflexion; Thumb, in opposition.*

has been the cause of much recent interest and various methods of bone lengthening have been employed, the most recent suggested by Harris of Toronto, who by producing prolonged hyperemia in a leg as the result of unilateral abdominal sympathectomy claims increased length of the limb to have resulted.

Stabilization of joints.—The operation most used for the stabilization of a joint is arthrodesis, in which all motion is eliminated by the production of bony fusion between the bones comprising the joint. The arthrodesis of a useless flail joint sometimes confers a benefit upon the patient that is to him almost akin to a miracle. This is perhaps demonstrated best in the case of the upper extremity where there is a flail shoulder. A remarkable improvement in function is obtainable (providing the scapular muscles and the forearm and hand are in good condition) if the shoulder is fused in the optimum position. This is 45° abduction, a little flexion and a few degrees of external rotation, in other words so that the hand may be held to the mouth; movement of the entire extremity now occurs between the scapula and trunk.

The condition of the hand may, in some cases, be improved if the carpal bones are fused to the radius with the wrist in a position of 30° dorsiflexion.

In the case of the spine, a paralytic scoliosis may be a great handicap. In the severe collapse of the spine that occurs, the spinal fusion operations of Hibbs or Albee or their modifications have great value. Not only may unsightly deformity be improved but the rigidity of the fused spine gives great improvement in strength, increased height is obtained, visceral function is improved and the patient is able to discard cumbersome and inefficient braces.

In the foot, arthrodesis has its greatest field of usefulness. In the mechanics of weight bearing and walking, stability is of greater importance than mobility. The elimination of movement in the inter-tarsal joints greatly assists weight bearing and walking in many paralytic feet. A great variety of procedures are available but the essential feature of most of them is the removal of side to side motion by arthrodesis of the subastragaloid joint (Davis's operation).

American orthopedic surgeons have done much for the surgery of the foot since Davis first described the subastragaloid arthrodesis. Their names are conveniently used to distinguish certain procedures, *e.g.,* the Ryerson triple arthrodesis, the Hoke operation, the Campbell bone block, and the Whitman astragalectomy. One important feature of the latter is the more even distribution of body weight between the forefoot and hind foot. This is obtained by posterior displacement of the foot, under the tibia after removal of the astragalus. This procedure is of value in certain kinds of calcaneal foot but has been largely superseded in some clinics by the operation of the English orthopedist, Naughton Dunn, in which the foot is displaced backwards beneath the astragalus after removal of the scaphoid bone and part of the head of the astragalus.

Re-establishment of muscle balance.—This naturally is brought about largely by the transplantation of muscles from one side of a joint to another. In English speaking countries it is the custom to combine this as a rule with stabilizing operations. Especially is this true in the foot. An important principle to be observed before carrying out any muscle transplantation is that all deformity present in the involved joint must first be corrected. It is too much to expect a transplanted muscle to have any effect in the correction of structural deformities. In fact, such a deformity may completely vitiate the result of a transplantation.

In this country, the procedures most commonly carried out are, in the foot, transplantation of the peroneal muscles to the heel or to the middle of the forefoot for the calcaneal or equinus deformities respectively. One of the varieties of subastragaloid arthrodesis is usually combined with it. At the University Hospital we find the Dunn procedure of great value. If peroneal muscles are transplanted to the heel, the increased projection backwards of the latter gives better leverage for the transplanted muscles. If the peroneals are transplanted to the front of the foot this procedure provides a shorter forefoot lever and therefore less weight to be lifted each time the transplanted muscles contract.

Another muscle transplant performed is of the biceps femoris at the knee. This muscle is brought to the front of the thigh and inserted into the patella to take the place of a paralyzed quadriceps muscle.

At the wrist, the flexor muscles may be used to take the place of digital extensors. Here the operation may be combined with arthrodesis of the wrist. At the elbow the origin of the flexor muscles of the wrist and finger may be transplanted higher up the humerus in order to increase their influence as flexors of the elbow and thus assist a paralyzed biceps muscle.

All of these procedures require very careful anatomical and physiological study before they are carried out and demand prolonged after-care attention to obtain satisfactory results.

When to operate.—In the correction of deformity due to muscular contracture, manipulative treatment and the division of soft tissue structures by open operation if indicated, may be done at any time. Other work of a reconstructive nature must be postponed until it is quite clear that no further spontaneous improvement in muscle function is to be obtained by the non-operative methods. Furthermore, in children, the ability of the child to coöperate must be considered before performing tendon transplantation; and operations upon bones such as arthrodesis must be delayed until the ossification is well advanced. As a working rule it may be said that arthrodesis operations should not be done before the age of 8 years and in some individuals should be left until a year or two later.

Meanwhile, when the stage of spontaneous recovery is over, ambulation of the patient is allowed with braces.

CONCLUSION

In general then it may be stated that every case of infantile paralysis demands, in its treatment, the coöperation of an orthopedic surgeon at the earliest possible date. Careful anatomical and physiological studies must be made if adequate measures are to be taken in the prevention of deformities and loss of function. In the re-education of paralyzed muscles, the most valuable physical therapeutic measure is the warm brine bath. In the acute stage, irritative physical therapy is to be condemned. The optimum position of joints for the return of muscle function is discussed and apparatus described for the retention of these positions.

In the later stages of the disease, operative treatment is used to correct deformities, stabilize joints and re-establish muscle balance. In doing this, orthopedic surgery aims at the removal of the stigmata of cripplepdom, at the production of physical independence on the part of the patient, to improve his efficiency and to diminish his suffering.

SODIUM AMYTAL IN THE TREATMENT OF TOXEMIA OF PREGNANCY

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During the last year three cases of severe toxemia have come under my care which I wish to report. All were given daily administrations of sodium amytal; one which developed convulsions soon after admission was given avertin per rectum to control the convulsions, followed by the usual sodium amytal treatment of gr. 3 three times daily.

Case 1.—Mrs. v. D., aged twenty-two, was admitted to the Woman's Hospital, Detroit, May 8, 1931. She last menstruated Sept. 14, 1930. The estimated date of confinement was June 21, 1931. Para III. Her first pregnancy in 1927 ended in a spontaneous miscarriage at three and one-half months. Her second pregnancy in 1928 ended in a spontaneous miscarriage at three and one-half months. She believes both miscarriages were brought on by severe vomiting. Otherwise her past history was negative. On admission she gave a history of a severe headache and vomiting for the last twelve hours. On examination her blood pressure was: systolic 178, diastolic 120; urine showed 4 plus albumin with many hyaline and granular casts. There was considerable edema of face, hands and lower extremities. The fetal heart tones were present and of good quality. The uterus and fetus were small for the duration of pregnancy (7½ months). The pelvic measurements were normal. A diet of low protein, salt-free, was ordered and sodium bromide gr. xxx and chloral hydrate gr. xv was ordered by rectum along with the usual routine treatment, which consisted of elimination and rest. Twenty-four hours after admission, the patient went into convulsions. She was given morphine in large doses with intravenous magnesium sulphate solution which failed to stop the convulsions. Avertin was then decided upon. By the time this

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was prepared the patient had had five convulsions. A dose of 8.8 cubic centimeters was given per rectum in 200 c.c. of water as a retention enema. Within five to ten minutes the patient was asleep and had no more convulsions. In the morning she seemed much improved and a conservative line of treatment was agreed upon. The usual routine of elimination was adopted as to rest, diet, and increased fluid intake was carried out along with oral administration of sodium amytal gr. iii three times daily. The edema disappeared in about one week and the blood pressure and urinary findings are shown in the accompanying chart.

Mrs. v. D. Para III. Due June 21, 1931. Aged twenty-two.

Date	*B. P.*	*Urine*
May 9, 1931	178/120	4 plus alb. Hyaline and granular casts.
Five convulsions—given 8.8 c.c. avertin by rectum.		
May 10, 1931	140/118	
May 11, 1931	170/120	
May 12, 1931	160/112	Cath. spec. Alb. 0.104 per cent. Many hyaline and and granular casts.
May 13, 1931	168/110	4 plus alb. Many hyaline and granular casts.
May 14, 1931	144/108	4 plus alb. Few hyaline casts.
May 15, 1931	130/98	4 plus alb. Few hyaline casts.
May 16, 1931	168/110	4 plus alb. Few hyaline casts.
May 17, 1931	132/100	4 plus alb. Occ. granular cast.
May 18, 1931	134/110	4 plus alb. Few casts.
May 19, 1931	138/108	4 plus alb.
May 20, 1931	136/100	3 plus alb.
May 21, 1931	144/110	3 plus alb.
May 22, 1931	142/104	3 plus alb.
May 23, 1931	140/98	1 plus alb.
May 24, 1931	148/96	2 plus alb.
May 25, 1931	138/102	1 plus alb.
Up in chair.		
May 26, 1931	138/104	3 plus alb.
May 27, 1931	148/98	2 plus alb.
June 1, 1931	115/72	2 plus alb.
June 4, 1931	100/68	2 plus alb. Hyaline casts 3 plus.
June 6, 1931	130/92	2 plus alb. Hyaline casts 2 plus.
Discharged.		
June 9, 1931	162/108	1 plus alb. Few casts.
Readmitted.		
June 11, 1931	152/118	1 plus alb. 20 W. B. C. to L. P. F.
June 13, 1931	150/104	2 plus alb.
Spontaneous rupture of membranes.		
June 14, 1931, in labor	160/118	3 plus alb. 100 W. B. C. to L. P. F.
Delivered, premature 3 lb. 15 oz.		
June 17, 1931	118/88	Cath. spec. 1 plus alb. Loaded with W. B. C.
June 24, 1931, 10 da. P. P.	122/76	Cath. spec. Trace alb. 30 W. B. C. to L. P. F.
June 29, 1931,	120/72	Voided alb. neg. Micr. neg.

The patient was allowed to go home on June 6, 1931, but was readmitted three days later with her blood pressure up. On June 13, 1931, the membranes ruptured spontaneously. Twenty-four hours afterward labor began and the patient had a spontaneous delivery of a female child weighing 3 pounds 15 ounces, which is now living and well. The mother made an uneventful recovery and was discharged in ten days. Blood pressure normal. Urine almost clear.

Case 2.—M. K., aged thirty-eight, Para I, was admitted to the Woman's Hospital, Detroit, May 24, 1931. Her last menstruation occurred Sept. 25, 1930. Labor was due July 2, 1931. She was married three years and was never pregnant before. Her past medical and surgical history were negative. On admission her blood pressure was systolic 190, diastolic 124, and urine showed 4 plus albumin. Edema of face, ankles and abdominal wall was very marked. The fetal heart tones were of good quality. The child seemed small, the estimated weight being 3½ lbs. Because of the size of the baby and the age of the patient, conservative treatment was decided on in order to get a larger baby. The usual routine of elimination, rest, diet, increased fluid intake were carried out along with the oral administration of sodium amytal gr. iii, three times a day.

Mrs. M. K. Para I. Due July 2, 1931. Aged thirty-eight.

Date	*B. P.*	*Urine*
May 24, 1931	190/124	Alb. 4 plus. Many hyaline and granular casts.
Edema 2 plus. Rx. Intravenous Mag. Sulph. 20 c.c. 10 per cent. Sod. Amytal gr. iii t. i. d.		
May 25, 1931	182/114	Alb. 4 plus. Many hyaline and granular casts.
May 26, 1931	188/114	Alb. 4 plus. Casts 3 plus.
May 27, 1931	178/114	Alb. 4 plus. Casts 3 plus.
May 28, 1931	176/114	Alb. 4 plus. Casts 4 plus.
May 29, 1931	174/96	Alb. 4 plus. Casts 3 plus.
May 30, 1931	188/114	Alb. 4 plus. Casts 2 plus.
May 31, 1931	170/108	Alb. 4 plus. Casts 2 plus.
June 1, 1931	172/114	Alb. 4 plus. Casts 3 plus.
June 2, 1931	166/112	Alb. 4 plus. Casts 2 plus.
June 3, 1931	166/114	Alb. 4 plus. Casts 30 to L. P. F.
June 4, 1931	168/116	Alb. 4 plus. Casts 1 plus.
June 5, 1931	160/116	Alb. 4 plus. Casts 3 plus.
June 6, 1931	158/108	Alb. 4 plus. Casts 3 plus.
June 7, 1931	150/104	Alb. 4 plus. Casts—few.
June 8, 1931	152/110	Alb. 4 plus. Casts 2 plus.
June 9, 1931	156/100	
Low Cesarean Section—5 lb. 12 oz. child delivered.		
June 10, 1931	150/100	
June 11, 1931	158/100	
June 13, 1931	160/102	Cath. Spec. Alb. 4 plus. Casts 3 plus.
June 19, 1931	148/104	Cath. Spec. Alb. 2 plus. Casts 2 plus.
June 21, 1931	144/96	
Discharged.		
Aug. 1, 1931	132/78	Voided Spec. Alb. faint trace. No casts. 30 W. B. C. to L. P. F.

The blood pressure gradually came down, the edema soon disappeared but the albumin in the urine remained the same, namely 4 plus. On June 9, 1931, sixteen days after admission, it was decided the child was large enough to live and a low cesarean section was done, when a female child three pounds 12 ounces was delivered. The child is now living and well. The mother made an uneventful recovery and was discharged on the twelfth day post partum. Six weeks post partum her urine still showed a faint trace of albumin but her blood pressure was normal for her age—132/78.

Case 3.—Mrs. H. L., aged twenty-seven, Para I, entered Cottage Hospital May 27, 1931. Last menstruation was on Oct. 27, 1930. Due Aug. 4, 1931. Six and one-half months pregnant. She had scarlet fever thirteen years ago. Her blood pressure 172/108. Urine showed 4 plus albumin. Marked edema of ankles. Fundus reached to navel. She was given the routine of diet, elimination, rest, increased fluid intake and sodium amytal gr. iii three times daily. Daily record of urine and blood pressure.

Mrs. H. L. Para I. Due Aug. 1931. Aged twenty-seven.

Date	*B. P.*	*Urine*
May 27, 1931	172/108	Alb. 4 plus. Granular casts 1 plus.
May 28, 1931	166/100	Alb. 3 plus. Granular casts 1 plus.
May 29, 1931	158/94	Alb. 3 plus. No casts.
May 31, 1931	160/95	Alb. 3 plus. No casts.
June 2, 1931	162/98	Alb. 4 plus or 0.35%.
June 4, 1931	160/100	Alb. 2 plus.
June 6, 1931	165/100	Alb. 2 plus or 0.22%.
June 8, 1931	170/120	Alb. 2 plus or 0.22%.
June 10, 1931	172/110	Alb. 3 plus.
June 12, 1931	158/98	Alb. 4 plus. Pus cells 2 plus.
June 14, 1931	165/102	Alb. 4 plus. Occ. pus cell.
June 16, 1931	170/110	Alb. 4 plus. No casts.
June 18, 1931	168/105	Alb. 4 plus. or 0.3%.
June 20, 1931	163/100	Alb. 4 plus. Micr. neg.
June 22, 1931	170/110	Alb. 4 plus or 0.3%.
June 24, 1931	162/104	Alb. 4 plus or 0.3%.
June 26, 1931	180/120	Alb. 4 plus or 0.33%.
June 28, 1931	175/110	Alb. 4 plus. Occ. pus cell.
June 30, 1931	178/108	Alb. 3 plus.
July 2, 1931	170/110	Alb. 4 plus or 0.3%.
July 4, 1931	182/118	Alb. 3 plus.
July 6, 1931	185/118	Alb. 3 plus. Occ. cast.
Labor induced by rupture of membranes.		
July 7, 1931, during labor	203/140	Alb. 4 plus. Casts 1 plus.
Delivered female child, weight 3 lbs. 12½ oz.		

July 8, 1931	136/100	Cath. Spec. Alb. 1 plus. No casts.
July 11, 1931	170/120	Cath. Spec. Alb. 1 plus. Many R. B. C. and W. B. C.
July 14, 1931	150/100	Cath. Spec. Alb. 1 plus. Occ. pus cell.
July 16, 1931	148/100	Alb. trace. Occ. hyaline cast.
July 18, 1931	140/88	Alb. 1 plus. Occ. pus cell.
July 20, 1931	136/80	Alb. 1 plus. Many pus cells.
Discharged.		
Sept. 5, 1931	128/60	Alb. neg. Micr. neg.

Under this treatment her edema soon disappeared. She felt fine but the blood pressure remained high and the albumin still remained in the urine. After a stay of forty days in the hospital, and the pregnancy was past eight months, labor was induced by rupture of membranes. Within twenty-four hours patient delivered a premature child, weight 3 pounds 12½ ounces. During labor she was given sodium amytal gr. iii every two hours until she slept well between pains. No other anesthesia was used. Mother made an uneventful recovery, and two months later blood pressure was normal and urine clear. Child is now living and well.

COMMENT

In this small series of three cases of severe toxemia it will be noted the patients were carried along from 15 to 40 days until we felt the child was large enough and mature enough to live. All the patients, although their blood pressure remained high and the albumin remained in the urine, felt very well, were free from headache and could not understand why they were being held in bed. Amytal should be superior to morphine as a sedative in these patients, since it is non-habit forming and can be given over a long period of time without injury to the fetus or mother. It is excreted by the lungs and throws no added work on the kidneys. Had not the sodium amytal been given could we have carried these patients along for this length of time? From the observation of such a small number of cases we do believe sodium amytal is of value, in preventing convulsions, in the treatment of toxemia.

RENAL TUBERCULOSIS WITH ANURIA DUE TO CALCULUS DISEASE*

GEORGE SEWELL, M.D.†
DETROIT, MICHIGAN

Nephrectomy for unilateral renal tuberculosis has become an established surgical procedure. Unfortunately the patients often do not present themselves early enough and the protean manifestations of the disease may make the diagnosis simple, or, on the other hand, one of the most baffling of urinary diseases. In these latter cases the exact diagnosis can often be made only after a long period of study and observation, bringing into use all the technical procedures at the command of the experienced urologist. Whilst early nephrectomy is advisable in those cases apparently proven unilateral, probably over half the cases ordinarily seen have evidences of bilateral involvement as proven by bilateral pyelograms, cultures and guinea pig tests from both kidneys, etc.

Although some surgeons have advocated the removal of the more actively diseased kidney in bilateral tuberculosis, a study of post-operative results in such cases shows the hopelessness of the situation. In this group of cases the use of heliotherapy by means of the carbon arc certainly tends to make life more tolerable and sometimes seems to arrest further progress of the disease.

Of those cases thought to be unilateral at the time of nephrectomy 15 to 20 per cent will die of uremic symptoms within three years. Thus the development of uremic symptoms in a patient who has recently had a tuberculous kidney removed is usually taken to mean a rapid extension of the process to the other kidney and immediate death.

That such is not always true is evidenced by the following case report, which illustrates a case where the right kidney had been removed 6 months previous with pathological report proving tuberculosis and the other ureter became blocked by a calculus requiring ureterotomy. Subsequently the patient has passed three more small stones. Case No. 10492 came on the urological service at Herman Kiefer Hospital April 18, 1931, with a draining sinus in right lumbar region following a nephrectomy at another hospital some three months previous. Prior to the nephrectomy he had been under observation for about one month. His chief complaint at that time had been a constantly increasing weakness for the past several months, loss of 40 pounds in weight and extreme constipation. On close questioning a nocturia of once or twice was admitted. Because of the history of continued constipation proctoscopic examination had been made but was negative. Four days after proctoscopic examination patient suffered several severe chills with pyuria of about 100 cells per h.p.f. Cystoscopy was done but owing to in-

*Read at Herman Kiefer Hospital Staff Meeting, December 7, 1931.

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tense edema of bladder mucosa right ureter orifice was not located. Left ureter orifice was negative. Indigo carmine given appeared in normal time and with good intensity on left side but none appeared within twenty minutes on right side. Retrograde pyelogram made was not satisfactory, so intravenous pyelogram after injection of uroselectan was done. This showed no kidney function on right side. A right nephrectomy was done in the usual manner—a large pyonephrotic kidney being removed. The pathological report was returned chronic tuberculosis.

Fig. 1. K. U. B. plate (taken at time of anuria) showing calcification around left sacro-iliac joint but no definite evidence of calculus.

Fig. 2. Two weeks later. Calcification is present; ureter catheter in ureter.

On admission to our service his physical examination was essentially negative except for the draining sinus above mentioned and a slight tenderness noted in deep palpation over left kidney and left ureter.

Family History—No pulmonary or kidney diseases.

Industrial History—Has worked as a machinist for the past thirty years—a dusty and dirty trade.

Past History—Irrelevant. No known exposure to tuberculosis. Admits one attack of gonorrhea apparently without complications.

History by systems negative, except teeth show moderate dental caries and a few moist râles in apex of each lung are present. X-rays of lungs negative.

Under general carbon arc light treatments patient's general condition improved gradually and draining sinus healed.

After being in hospital about two months patient experienced the sudden appearance of colicky pains in left lumbar region extending around to scrotum. This was accompanied by chills and fever and the passage of a very small amount of bloody urine and patient rapidly entered a state of collapse, with anuria for three days, accompanied by nausea, vomiting and hiccough. Because of the acute onset of the symptoms a blockage by calculus was considered in spite of the fact that a flat plate failed to reveal any such evidence. Immediate cystoscopy was done. Bladder was inflamed and left ureter opening edematous—ureter catheter could be passed only for about 2 cm. up left ureter when a definite obstruction was encountered. Because of this positive finding and of the patient's grave condition, immediate ureterotomy was done under spinal anesthesia. When the ureter was picked up it was found to be edematous and swollen to the size of the little finger, but not the hardened thick ureter characteristic of tuberculous ureteritis. Urine or serous exudate could be squeezed through its walls, so that obstruction was apparently present. The ureter was therefore incised and much urine immediately gushed forth. Owing to the extreme condition of patient it was not thought advisable to tarry too long attempting to find the stone. A catheter was inserted up the ureter and passage was free to the distance of the kidney pelvis. Another catheter was pushed downward toward the bladder and after meeting with some obstruction which easily gave way the lower ureter was thus opened. The post-operative course was uneventful and recovery from uremic symptoms immediate. Patient urinated through urethra on fifteenth day and ureterotomy wound completely healed in twenty-one days.

Three weeks later patient complained of not urinating for 24 hours so was immediately cystoscoped again. Bladder was covered with incrusted cystitis—unable to pass No. 5 ureter catheter but after some difficulty a No. 4 was passed and was able to dilate to No. 5. A small stone was seen to be lying on base of bladder.

Urine specimen obtained from left kidney pelvis showed a pure culture of proteus vulgaris, agglutination with the blood positive 1-640. An autogenous vaccine was made from the proteus vulgaris culture and administered at three-day intervals for the next three months. Patient improved remarkably but complained of being unable to urinate if standing up but could do so with ease when lying down.

October 10, 1931. The stone was removed from bladder by means of cystoscopic rongeur. Patient could urinate in erect position as soon as tried a few days later.

The X-ray findings were as follows: Lungs negative on several occasions. K. U. B. ray—"Right kidney not seen. Left kidney well outlined appears to be a little larger than normal. There are dense calcifications in the region of the left sacro-iliac joint.

They do not resemble calculi." On every plate this calcification was seen and the obstructing calculus of the ureter did not show on the X-ray plate. About six weeks after the ureterotomy a left pyelogram made appeared normal.

Blood counts were normal, Wassermann negative, Vernes Test for tuberculosis 4 plus.

Urinalyses showed pus cells repeatedly with occasionally a trace of albumin, but failed at any time to show the presence of the tubercle bacillus.

SUMMARY

1. A case of anuria due to blockage of the remaining kidney present is reported in which the other kidney had been previously removed for tuberculosis. Blockage was due to ureteral calculus.

2. Calcifications evident around the sacro-iliac joint appeared the same before and after the removal of the stone.

3. The patient has subsequently passed several stones with no apparent change in the calcifications.

4. Pure cultures of proteus vulgaris were obtained from the urine and patient's clinical progress seemed to be helped by the use of an autogenous vaccine.

5. The occurrence of uremic symptoms some months after nephrectomy for urinary tuberculosis does not always portend a fatal issue due to involvement of the other kidney but may mean obstruction to the remaining kidney. This can be diagnosed by immediate cystoscopy with ureteral catheterization and, if obstruction to catheters is present due to stone, should be relieved by immediate operation.

1116 DAVID WHITNEY BLDG.

DR. RICHARD R. SMITH HONORED

A complimentary dinner was tendered Dr. Smith of Grand Rapids by the Fifth Councillor District of the Michigan State Medical Society as announced, on January 14, 1932. Dr. R. H. Dunham, President of the Kent County Medical Society, after a brief address complimentary to the guest of the evening, introduced Dr. B. R. Corbus, chairman of the council of the Society, who in turn presented Dr. Carl F. Moll, President of the Michigan State Medical Society. Dr. Moll complimented the governor on the wisdom of the appointment made in the way of a successor to the late Dr. W. H. Sawyer, as Regent of the University. He assured Dr. Smith, the newly appointed Regent, of the loyalty and support of the State Medical Society.

Dr. Corbus as toastmaster spoke of the splendid professional career of the newly appointed Regent and of his influence upon medicine and surgery, not only of Grand Rapids but also of the state. On being introduced Dr. Smith responded with an interesting address on the Privileges and Responsibilities of the Doctor Today.

"I want to thank you," said he, "for this demonstration of your goodwill and friendship. I want to thank each and every one of you for coming here tonight to this dinner in my honor. I am indeed most grateful. I want to thank the Council of the State Society and its committee for the time and effort they have given to arranging it all. Particularly do I wish to thank Dr. Corbus, our District Councilor and toastmaster, who was so good as to initiate the plan and who has been most eager and persistent in carrying it out. I want to thank President Ruthven, Dr. Marshall, Dr. Robb and Mr. Wishart for the compliment they have paid me in coming here tonight to grace this occasion and to contribute in speech so vitally to the success of this occasion. (Regents.) Our Toastmaster and Dr. Denham and Dr. Moll have been most kind in what they have said of me. It gives me a thrill, and I believe a pardonable sense of gladness, that after all these years of practice among you I can be here tonight to listen to so many kind and complimentary things.

"At the time that Governor Brucker conferred upon me the great personal honor of appointing me to the Regency of the University, quite the greatest honor that has ever come to me, I was aware that I was appointed largely because I was a representative of a profession that has, and is contributing a great deal to the welfare of the people of Michigan. It was a fitting recognition by Governor Brucker of the importance of the work that you are doing. Since the medical school is a vital part of the University I am especially pleased that a representative from the medical profession was appointed to fill the vacancy created by the passing of Dr. Sawyer, a most wise counselor and a man who gave without stint of his time and energies to the welfare of the Uni-

versity and the medical school. It was due in no small way to the hearty and loyal co-operation of Dr. Sawyer that the medical school continues to occupy the place which it now occupies among the medical schools of the country. I am only hoping that I may be able to fill his place with some sort of credit to you, the members of the medical profession, the people of the State of Michigan, the University, and the President and Board of Regents of that great institution.

"I hope I may be pardoned if on this occasion I speak about some of the fundamentals of medical practice. I have been in practice now a good many years and have necessarily acquired certain viewpoints. Too often in the midst of daily duties and many annoyances we cannot, so to speak, and to quote a familiar saying—too often we cannot see the forest on account of the trees.

"The life of a doctor is one richly endowed with privileges. Of all the splendid services performed by man for his fellow men, the service of a doctor stands out unique, valuable beyond estimation, and satisfying to him who performs it. It satisfies the mind and it satisfies the heart, and every urge that one has to be useful. Men in other callings are often diverted from them. Lawyers leave their profession to go into business; a business man often sells furniture one year and the next year he is selling vacuum cleaners. The doctor rarely changes. Once he has put his shoulder to the wheel he continues to the end. He is in love with his work and it carries him along through many a trial and disappointment. It is an anchor in time of trouble. He shares with the clergy a place in the hearts of people accorded to no other profession or calling. To be able to render the service he does is his greatest privilege.

"He is following a calling alive with scientific interest. Medical science has engaged some of the finest minds that the world has produced. Here is a field in which one may find an outlet for every intellectual effort of which he is capable. Stories of the great discoveries in medicine are found in the lives of our great masters, and are full of drama and even romance, of ingenuity, courage, patient persistence and conquest. Could there be any novel more entertaining, any story of adventure more thrilling than the account of the discovery of the cause of yellow fever, leading at once to a nearly complete eradication of this dread pest from the western hemisphere? There are few Pasteurs, Listers, Oslers or Mayos, but to each and every one of us these opportunities in smaller ways are open. Always there are new fields to conquer. Progress in medicine is noted by a thousand contributions, and each one of us may add a little if he so wills.

"There is open to the doctor a magnificent literature. Text-books and monographs that tell us of what has been accomplished, and hundreds of periodicals alive with new ideas, and fresh discoveries, reflecting a reaching out toward that ever receding day when we shall know all there is to know about the human body. I can hear somebody saying this a thousand years from now. We have splendid libraries, and books and periodicals can be acquired for a pittance in comparison with their real value. I know of no profession more splendidly equipped in this respect. It is indeed a great privilege. We have our medical society meetings, where we may gather to discuss and learn, as no man can advance all by himself. Here also we make our contacts with, and acquire, our friends in the profession. It is indeed a privilege. The doctor of today has at his command hospitals, laboratories, convenient offices, assistants, nurses and lay workers, all there to facilitate his work and to improve its quality. What a great change in thirty years. These things are taken as a matter of course by the younger men, and more deeply appreciated by those of us who have been obliged in former years to practice without them.

"Among a doctor's privileges is a certain independence which the life affords. There is ever opportunity for self advancement and for satisfying one's initiative. We are seeing a gradual socialization of medicine. How far it will go who can say? We are fearful of this, and among our many reasons I believe that above all stands the fear of losing this independence and with it our opportunities for self development and the exercise of our initiative. We may be sure of one thing, however, that by hook or crook eventually the public is going to demand and obtain good medical service, and that whatever the economic conditions under which we practice, the doctor will remain the keystone in the arch of such medical service. We shall have a place in the sun.

"Doctors have many other privileges, but

these are the only ones that I can think of just now. For fear that some of our lay guests may think that the life of a physician is one of unalloyed joy, I hasten to say that it is one of very grave responsibilities in keeping with the importance of his work, and these responsibilities weigh heavily upon the physician at all times. We are not engaged in selling merchandise, nor dealing with commercial values, but we are entrusted with precious human lives. We are not in a business, we are in a profession. Much depends upon our actions, and mistakes may be costly. Keen concentration upon our work, and everlasting vigilance are necessary to success, and the burden is at all times a heavy one. The responsibilities of doctors are growing heavier, not lighter. Much more may be done for patients than formerly. There is call for greater knowledge and greater skill. So many details must be carried out that formerly were not required, and disease must often be detected in its earliest stages in order to correct it. Doctors pay heavily for the privileges which they enjoy. They have their full share of troubles of all kinds. If I should begin to enumerate them I am afraid that I should bring you all to tears, and I should not like to see our lay guests here tonight witness your weeping.

"Progress in medicine is rapid. Each year are presented innumerable new ideas. Add a fact or two, change the viewpoint, and there is born a new truth. The well posted man of today is in a few years hopelessly behind, unless he keeps constantly in step with progress.

"Many personal qualities seem essential to success in practice. Energy, hard work, determination, a personality that inspires confidence in patients, and certain attributes of heart, but I am impressed as the years go on that practice is drifting more and more to the men who have knowledge and skill and know how to apply them. One cannot succeed eventually unless he cures or benefits his patients. Osler was known for his superb qualities of heart, his kindness, sympathy and understanding. He was one of the most beloved physicians of his day, but this is not what made Osler the great physician that he was. It was his keen intellect, his profound knowledge of medicine, his ability to impart that knowledge by text and speech to others, and a skill in applying what he knew (a superb art) to the diagnosis and treatment of his patients. These last are the things upon which we must rely more and more as time goes on.

"Graduates of today are infinitely better prepared for their life work than ever before. Improvement has been gradual and very great. A good foundation in medicine is becoming more and more essential to success. The responsibility placed upon a medical school is an ever increasing one. Much was done for medicine when early in the century the Rockefeller Foundation divided medical schools into A, B and C grades, for it at once did away with most of our unworthy medical schools which were pouring out thousands of doctors a year upon a helpless public. A medical school is worthy just so far as its graduates can serve the public. Among its objectives, that should ever stand first. Here in Michigan we are anxious that the men who in time are to replace us in practice should be well grounded and we may well lend our support to our medical school and hospital for this purpose, and now I am talking of our medical school. Aside from the teaching of undergraduates the school offers splendid courses in graduate study. Some stay after graduation and become assistants and acquire special training. They often become the superior men in different localities.

"I wish I had time to speak more fully of the opportunities now open to doctors of the state in post graduate work. Under the skillful guidance of Dr. James D. Bruce it has already gained a considerable headway.

"Graduation in medicine is but the beginning of a life of study and advancement in knowledge and skill. The opportunities we have are in most respects well developed. Opportunities for post graduate work at our great medical schools are still comparatively undeveloped, but they are slowly improving. I can visualize the time when the facilities for teaching will have advanced to a point where every practitioner of medicine in Michigan, specialist or otherwise, will be spending a month or more of his time each year or two at our University or at one offering similar superior advantages. When that day comes we shall be able to render a still better service to the patients that we serve."

The next speaker was Dr. W. H. Marshall of Flint, who took as his subject,

The General Practitioner. Dr. Alexander G. Ruthven, president of the University, spoke on the Super-University, indicating the ever increasing service the institution endeavored to render. Dr. J. M. Robb of Detroit, president-elect of the Michigan State Medical Society, spoke on the subject of the Growth of Specialism. The final address was by Dr. Alfred W. Wishart of Grand Rapids.

The demands upon space in this number of the Journal render it necessary to defer publication of two of these excellent and timely addresses to future numbers of the Journal. The Journal has already commented editorially on Dr. Smith's appointment as Regent.

FAMOUS MEN IN MEDICAL HISTORY

JOHN SHAW BILLINGS

By HENRY J. FAUL

The history of the world shows that at certain epochs men are raised up to do great and needed work, to evolve order out of chaos, to direct and guide, with unfaltering courage and unerring judgment, purposes, and events, to gather about them co-workers trained, strong to assume responsibility, equipped for great undertakings and loyal ever in the pursuit of duty. Thus came Dr. John Shaw Billings into the days of the formative period of progress in the medical profession, to lay the foundation on which its development and growth in the future were to be builded.

John Shaw Billings was born in Cotton township, Switzerland county, Indiana, April 12, 1838, a part of the country which was sparsely settled at that time. The greater part of his boyhood and youth was spent in Indiana, but during his first ten years his family successively moved to Indiana, New York, Rhode Island, and at the age of ten years back to Indiana, where his father kept a country store in Allensville, and here young Billings lived until he left home for college.

It was a pioneer community. Along the Ohio river men worked as boatmen, artisans, merchants; back from the river stretched farm lands. With its New England traditions the Billings family counted books quite as necessary household equipment as tables, chairs, or clothing. The mother was a persistent reader. In later years when the Billings family lived in Dayton, Ohio, she was one of the most regular patrons of the Dayton library, reading constantly and widely, apparently enjoying biography, fiction, travel, and philosophy equally well. Many of her traits were reflected in her son.

We can gather a glimpse of his character from a biographical essay he made in later life:

> "When I was about ten years old, my father moved to Indiana and established himself in a little cross-roads village called Allensville, on the road from Rising Sun to Vevay. Here he kept a country store—was postmaster, and had a small shoemaker's shop in which one man was employed. I learned something of shoemaking—had some experiences in keeping store. I read incessantly. Came across a book—I have forgotten its title—which had a number of Latin quotations in it, asked a young clergyman (Mr. Bonham) how I could learn Latin—and got a Latin grammar and reader—a copy of Cæsar, and a Latin dictionary, and set to work. It was difficult, but with the aid of Mr. Bonham I made good progress. Then I made an agreement with my father that if he would help me through college, in the least expensive way, all of his property should go to my sister, and that I must expect nothing more. I then got some Greek books, a geometry, etc., and went on to fit myself to pass the entrance examination for the sub-freshman class at Miami University, Oxford, Ohio. I succeeded in doing this in a year—and passed the examination in the fall of 1852. For the first two years I kept bachelor's hall, living on bread, milk, potatoes, eggs, ham; such things as I could cook myself. The lessons gave me little trouble. Most of my time was spent in reading the books in the College Library. I was omnivorous, read everything in English as it came, philosophy, theology, natural science, history, travels and fiction."

Billings graduated from Miami in 1857 with the second honor in his class. He planned to study medicine but had to wait a year till he earned money enough for the medical school. The summer of '57 was spent in traveling with an itinerant showman, and by this means and by tutoring he earned and saved money enough to enter the Medical College of Ohio, at Cincinnati, in the fall of 1858. He had very scanty

funds and thus had to practice severest economy. In referring to this part of his life, Dr. S. Weir Mitchell said, "Of these years of privation he spoke to me once or twice, with assurance of his belief that he never recovered from the effect of one winter in which he lived on seventy-five cents a week, subsisting chiefly on milk and eggs."

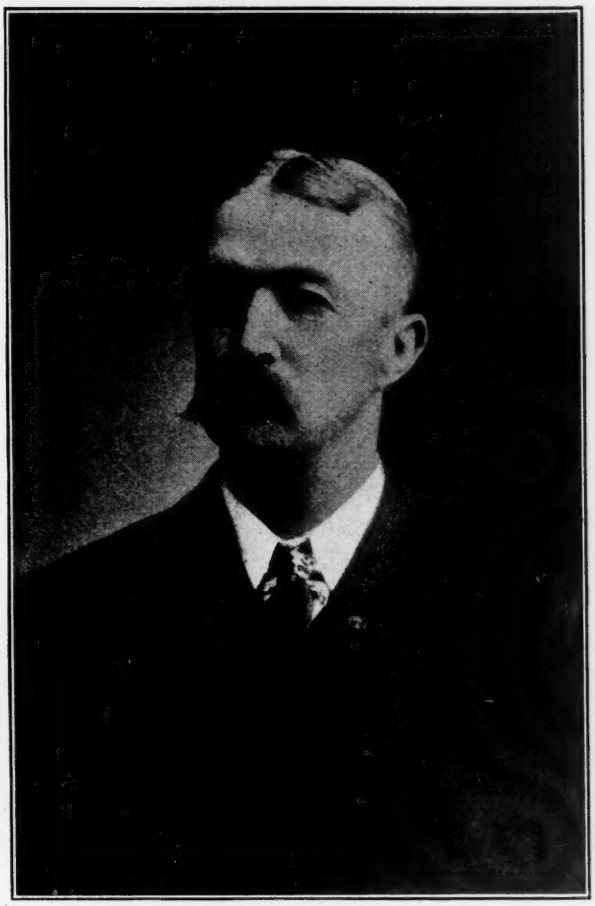
He described his medical college experience as follows in a speech long years afterward:

"I graduated in medicine in a two-years' course of five months lectures each, the lectures being precisely the same for each year. I had become a resident in the hospital at the end of the first year's studies. There was I a resident of the City Hospital of one hundred and fifty beds, where I was left practically alone for the next six months, the staff not troubling themselves very much to come during the summer time, when there was no teaching. In those two years I did not attend the systematic lectures very regularly. I found that by reading the text-books, I could get more in the same time and with very much less trouble. I practically lived in the dissecting room and in the clinics, and the first lecture I ever heard was a clinical lecture. The systematic teaching of those times I have had to unlearn for the most part. There is a new chemistry, a new physiology, a new pathology. What has remained is what I got in the dissecting room and in the clinics."

The medical college required a graduation thesis from all its candidates for a degree. The surgical treatment of epilepsy was the subject chosen by Billings and it was the preparation of this thesis which led him to see the necessity of an index to the literature of medicine, and it was the fulfillment of this vision which led him to accomplish his monumental work in the Surgeon General's Library years after. This interesting experience is adequately related in his own words:

"In the thesis just referred to, it was desirable to give the statistics of the results obtained from certain surgical operations as applied to the treatment of epilepsy. To find these data in their original and authentic form required the consulting of many books, and to get at these books I not only ransacked all the libraries, public and private, to which I could get access in Cincinnati, but for those volumes not found here (and these were the greater portion), search was made in Philadelphia, New York, and elsewhere, to ascertain if they were in any accessible library in this country.

"After about six months of this sort of work and correspondence I became convinced of three things. The first was, that it involves a vast amount of time and labor to search through a thousand volumes of medical books and journals for items on a particular subject, and that the indices of such books and journals cannot always be relied on as a guide to their contents. The second was, that there are, in existence somewhere, over 100,000 volumes of such medical books and journals, not counting pamphlets and reprints. And the third was, that while there was nowhere, in the world, a library which contained all medical literature, there was not in the United States any fairly good library, one in which a student might hope to find a large part of the literature relating to any medical subject, and that if one wished to do good bibliographical work to verify the references given by European medical writers, or to make reasonably sure that one had



JOHN SHAW BILLINGS

before him all that had been seen or done by previous observers or experimenters on a given subject, he must go to Europe and visit, not merely one, but several of the great capital cities to accomplish this desire.

"It was this experience which led me, when a favorable opportunity offered at the close of the war, to try to establish, for the use of American physicians, a fairly complete medical library, and in connection with this to prepare a comprehensive catalogue and index which should spare medical teachers and writers the drudgery of consulting ten thousand or more different indexes, or of turning over the leaves of as many volumes, to find the dozen or so references of which they might be in search."

The year after his graduation he became a demonstrator of anatomy in his medical school, and on the knowledge acquired in this capacity was built his work as a surgeon in later years.

When the Civil War broke out Billings was considering a partnership with Professor George C. Blackman, but he gave up this

promising surgical career to enter the army as a surgeon.

In the fall of 1861 Billings was given his examination for admission to the Medical Corps of the United States Army and passed first in the list of candidates. He was appointed first lieutenant and assistant surgeon, and was placed in charge of Cliffbourne Hospital at Georgetown, D. C., which he developed into one of the most important of the army hospitals surrounding the Federal capital. At this time Dr. Billings met in Georgetown his future wife, Miss Kate M. Stevens, a daughter of Hon. Hester L. Stevens, a native of Rochester, New York, who settled in Pontiac, Michigan, became a prominent lawyer, later representing Michigan in Congress. Dr. Billings and Miss Stevens were married a year later, on September 3, 1862.

Four years of active service in camps and hospitals were crowned with the reward of a brevet lieutenant-colonelcy in the regular army, and the position of medical inspector to the Army of the Potomac, the rank and the honor coming in recognition of "faithful and meritorous services," bestowed by governmental order. In the great battles of the war, Chancellorsville and Gettysburg, he was in the midst of the fighting, exposed to rifle and artillery fire, engaged in the duty of caring for the sick and wounded, fearless of the dangers which surrounded him. As an operating surgeon he performed many operations of major character, including amputations and excisions, trephining and operations for gunshot wounds of the head and pelvis, in fact about all that was usually done in the pre-antiseptic period. He was the first surgeon in the war to attempt the unusual operation of excision of the ankle joint which had been done only two or three times before in the history of surgery, and was successful in his case.

His many letters to his wife tell frankly the story of his daily life, his companions, his hopes and fears, and often enough of his privations. On one occasion he writes, "Drew pay, which came just in time, as I was reduced to ten cents." Yet he has the courage still to say, "I believe all will prove best for us in the end and that both you and I, in the years to come, will be glad and proud that I was in this campaign."

In December, 1864, he was assigned to the Surgeon-General's office, where he remained until his retirement thirty-one years later. The library at this time contained a little over 1,000 volumes, a considerable increase over the small collection of books which was the beginning of the Surgeon General's library sometime prior to 1836. We see a slow growth of this collection before the advent of Dr. Billings. In less than a year after Dr. Billings' assignment to the library the collection comprised 2,253 volumes. From 1,865 the growth of the collection was due to the fact that the Surgeon General was permitted to use for this purpose a "slush fund" of $80,000 turned in from the Army hospitals at the close of the Civil War, and is indicated by the printed catalogues of June 12, 1868, containing 2,887 entries (6,066 volumes), and of 1871, including 13,330 volumes.

Between 1865 and 1887, the Army Medical Museum was, in effect, the old Ford's Theatre, in which President Lincoln was assassinated. The Surgeon-General's office proper, during this period, consisted of a series of rooms over the old Riggs' Bank. Here, among other official business, all new accessions in the way of books, pamphlets, and theses were ticketed and catalogued, after which they were sent to the Library hall in the Ford's Theatre, which was then in charge of Dr. Thomas A. Wise. So small were the accommodations over Riggs' Bank that the newly arrived boxes of books and theses had to be opened in the back yard.

In 1876 Dr. Billings published a Specimen Fasciculus of a Catalogue of the National Medical Library, which was submitted to the medical profession for criticisms and suggestions. In style and arrangement, this publication is practically identical with the present Index Catalogue, differing only in certain typographical details. The index of authors and subjects is arranged in dictionary order in a single alphabet, the articles indexed from periodicals are printed in alphabetical order in nonpareil type, and the larger subjects, *e.g.*, Abdomen, Abscess, Acids, etc., are carefully subdivided. At this time, the Library contained about forty thousand volumes and about the same number of pamphlets. As we see it now, the arrangement seems very simple, sane, and satisfactory. This solution of the problem was not so obvious, however, fifty-five years ago, and Billings reached it only after prodigious labor, countless experiments, careful consideration of the opinions and

suggestions of others, constant thought on his own part.

Necessary appropriations for the Library were made by Congress, upon which its collection of books gradually expanded from year to year up to its present status of over half a million volumes. But Dr. Billings did not rest content with appropriations. By means of gifts and exchanges and by ransacking such private collections as were generously thrown open to him he labored indefatigably towards completing his collection. Oliver Wendell Holmes, describing a visit of Dr. Billings to his private library in Cambridge, told how he came into the room, looked around, darted at a book which was the most valuable volume on the shelves, examined it, replaced it, took another survey, and made tracks for a second book which was the second most valuable book in the collection. Holmes with a twinkling eye added, "Why, Sir, Dr. Billings is a bibliophile of such eminence that I regard him as a positive danger to the owner of a library if he is ever let loose in it alone."

After the publication of the Specimen Fasciculus Dr. Billings, with the able assistance of Dr. Fletcher, who later carried on the work of Dr. Billings after his retirement, worked steadily at preparing the copy of the prospective Index Catalogue for a period of four years, until Congress made the appropriation for printing it in 1880. It was a massive volume of 888 pages. Upon its publication, the catalogue was gradually sent out to universities, laboratories, medical and public libraries, boards of health, and to physicians specially interested in scientific medicine. The reception by the medical profession and the organs of opinion in Europe and America was flattering in the highest degree; and its appearance marked an epoch in the development and improvement of medical literature. Editors of medical journals, chiefs of clinics and laboratories, and physicians writing upon all branches of medicine, who formerly had to obtain historical, statistical, and other data in the most haphazard way, now had their material ready to hand in the most convenient and accessible form possible.

Other volumes of the Index Catalogue followed year by year with extraordinary regularity, the first series of sixteen volumes, each of nearly 1,000 pages, completing the alphabet in 1895, just as Dr. Billings was retiring from the army. The second series was carried on by his successors, and the alphabet was finished with volume 21 in 1916, at which time the library contained 224,522 volumes and 337,120 pamphlets, 561,642 pieces in all.

The Index Catalogue, Dr. Billings always insisted, was not a medical bibliography, but merely an index to a particular collection. However, Sir William Osler declared at the memorial meeting for Dr. Billings that, "while the Catalogue only represents the contents of the Surgeon-General's Library, it really is an exhaustive index of medical literature. So general were Dr. Billings' interests that all departments of medicine are represented, and there is not a subject, as there is scarcely an author of note, ancient or modern, not in the catalogue. It has in high degree the two essentials of a good bibliography—comprehensiveness and accuracy. Taking the two series for reference purposes there has never been issued a work so generally useful to the profession."

In addition to the Catalogue Dr. Billings with Dr. Fletcher conceived the idea of a monthly index, which would give to physicians a classified record of the current medical literature month by month, a publication also of the greatest value to medical students. The first monthly number of this publication was issued on January 31, 1879. The Index had a constant struggle for subsistence after its origin. Several publishers undertook the project, lastly Dr. Fletcher himself, but he could not carry the burden and it was discontinued in 1898. In 1903 the Carnegie Institute of Washington took it up as one of the first of its publishing enterprises, with Dr. Fletcher as editor-in-chief; it has continued to benefit the medical profession up to the present time.

It is said of Dr. Billings that the three great things in his life after the war were the development of the Surgeon-General's Library and its catalogues, the planning of the Johns Hopkins Hospital, and the directorship of the New York Public Library. Any one of these tasks would have satisfied a normal man. But Dr. Billings was a genius, a man with an unlimited fondness for work, the faculty of accomplishment without apparent effort, a refusal to be balked at undertaking a task because it seemed too large or the end too remote. What came to hand was done well, with an originality and finality that encouraged the suggestion of further tasks.

In 1876, the same year that Dr. Billings published the Specimen Fasciculus, he was selected by the Trustees of the Johns Hopkins Fund along with four other eminent physicians to prepare essays regarding the best plans to be adopted in the construction and organization of the hospital for which Johns Hopkins had provided the largest gift of money which had been made up to that time for such a purpose. His essay was chosen as the best, and from 1876 to the opening of the hospital in 1889 he acted as the highly efficient medical adviser of the trustees of the Johns Hopkins Hospital, whose confidence he enjoyed in the highest degree.

Dr. Billings' interest in hospital construction can be traced to his experiences as a surgeon in the Civil war, in the course of which there was developed a new style of building hospitals, consisting of a central administrative building with barrack-like pavilions, either detached or connected by corridors. In the publication, if not in the origination, of this method of hospital construction, known in Europe as "the American system," Dr. Billings had the largest share through his valuable report on "Barracks and Hospitals," published in 1870, and through his work in planning and describing hospitals, especially the Johns Hopkins Hospital.

All the details of Dr. Billings' views and plans for the Johns Hopkins Hospital are too numerous and lengthy to discuss here but it is of interest to us all to relate a few of the outstanding specifications which marked such a new era in hospital construction and organization. He stated that the administration of the hospital should be upon the military or railroad plan, that is, under one head and only one; that it should have first-class physiological and pathological laboratories, a dispensary for out-patient relief, and that this department should be connected with the building set apart for the instruction of students and separated from the administration buildings; that clinical instruction should be mostly given in the wards and out-patient department and not in an amphitheatre, except in the surgical unit; that medical cases should not be brought from beds to an amphitheatre; and that a perfect system of records—financial, historical, and clinical—should be kept. He laid special stress at the start on the necessity of a medical school of much higher status than had hitherto existed in this country, providing liberally for the accommodation of resident students. Recommendation was also made for publication of annual volumes of reports, like those of Guy's or St. Bartholomew's Hospitals. He considered the question of obtaining the best men for the hospital. This he believed is accomplished not by attractive salaries but by offering every possible facility for scientific experiment and observation, and then having secured the best men obtainable it was necessary to "keep them good," and this latter was proposed to be obtained by giving ample room to "provide nutriment and space just as certainly as we must provide for the trees that we propose to plant, or else expect stunting, impaired vitality and absence of fruit." The classes, he insisted, should be small, that the whole of the graduating class should be employed in the hospital, that this number cannot exceed twenty-five, making the maximum number of students about one hundred twenty.

After writing his essay Dr. Billings went to Europe in company with Dr. Ezra M. Hunt, a sanitarian, to study hospitals and their construction.

The work having begun on the hospital in May, 1877, Dr. Billings presented a full report on the system of heating and ventilation to be adopted, which was specially devised to be suitable to the climate of Baltimore and the peculiar location and plan of the hospital. Dr. Billings' "Description of the Johns Hopkins Hospital," was published in 1890 and became a kind of text-book on the subject of hospital construction and ventilation.

During the years of construction the members of the medical and surgical staffs were selected. The first of these was that of Professor William H. Welch to the chair of pathology in 1884. This important selection was made largely at the instance of Dr. Billings and Professor Julius Cohnheim. In 1888 Dr. Billings again selected wisely, in the appointment of Sir William Osler as Physician-in-chief. Dr. Osler relates:

"An important interview I had with him illustrates the man and his methods. Early in the spring of 1889 he came to my rooms in Walnut St., Philadelphia. We had heard a great deal about the Johns Hopkins Hospital, and knowing that he was virtually in charge, it flashed across my mind that he had come in connection with it. Without sitting down, he asked me abruptly, 'Will you take charge

of the Medical Department of the Johns Hopkins Hospital?' Without a moment's hesitation I answered 'Yes.' 'See Welch about the details; we are to open very soon. I am very busy today; good morning,' and he was off, having been in my room not more than a couple of minutes."

In 1889 the Johns Hopkins Hospital was formally opened, and by 1893 the Medical School was in full swing, and its faculty soon established a well deserved reputation, at home and abroad, for original scientific work. To quote Dr. Fielding H. Garrison:

"Billings was a true prophet. All the fine things he had predicted for the hospital, twelve years before its completion, came to pass in time.

"With Eliot of Harvard and Pepper of Philadelphia, Billings will always be remembered in our medical history as one of those who have dared greatly and achieved greatly for the advancement of higher medical education in this country."

Dr. William Pepper, provost of the University of Pennsylvania, drew up an agreement with Dr. Billings, in 1889, with the approval of the Surgeon-General, to serve as director of the University Hospital, to take the chair of hygiene, to plan a laboratory of hygiene, and on completion of the Index-Catalogue to request retirement from the Army that he might give his entire time to academic work. Dr. Billings began to lecture on hygiene and vital statistics at the University of Pennsylvania during the academic year 1891-1892; and these lectures continued till he retired from the Army, after which he became full professor of hygiene at the University, having previously planned and opened its Laboratory of Hygiene on Washington's birthday, 1892. Original investigations on the influence of light and other agents on the typhoid and colon bacilli, on the bacteria of river waters, and on the composition of expired air and its effects on animal life were suggested and supervised by him while director of the laboratory of hygiene. However, his term of full professorship lasted for only one year, for in 1896 he became the Director of the proposed Public Library at New York, not because he was in any way dissatisfied with the former position, but because he believed that he could best contribute to the public good by undertaking the New York work. A new and final chapter, perhaps the greatest chapter in his life, was to open.

In 1839 John Jacob Astor bequeathed $400,000 for the erection and management of a public library for the City of New York. Later additional sums were given by William B. Astor and his grandsons. In 1870 James Lenox, a wealthy New Yorker, gave land, a library building and books, amounting *in toto* to two million dollars. Upon the death of Samuel J. Tilden in 1886 more than two million dollars were bequeathed to establish and maintain a free library and reading room in the City of New York, as a third benefaction to the City. These three libraries were established but all were in an identical situation; they had the best of intentions but inadequate funds. Mr. John L. Cadwalader of the Astor Library and Mr. Lewis Cass Ledyard of the Tilden Trust, realizing the hopeless situation of their respective libraries in maintaining themselves as individual units, decided to combine the two institutions. After many negotiations with their respective boards a successful outcome was realized. Mr. John Stewart Kennedy, president of the Lenox library, was then consulted and taken into the new plan, which resulted in the three institutions giving up their separate existence and the New York Public Library was formed on May 23, 1895.

Two major problems confronted the new institution: what was to be its policy, and, second, who was to be its executive officer to adequately carry through the great object in view? The latter problem was solved when the Executive Committee submitted the name of Dr. Billings to the trustees, who was at once approved by the board.

Dr. Billings came to this work at the age of fifty-eight, when most men begin to think of resting from their labors, but, possessing the sterling qualities of the capacity for work and for organization with an eagerness always to contribute to the public good, he undertook this great task, which resulted in the erection of the magnificent library building on Fifth Avenue, New York, and the remarkable removal to it of the million volumes now housed here, with a working staff of nearly a thousand people. However, the road to this end was a difficult one. To obtain the site for the library a special legislative act had to be passed, and the consent of the mayor, aldermen, and commonalty of the city obtained. It was also necessary to seek the aid of the city for the construction of the library, as sufficient funds were not at hand for this undertaking. To accomplish this another act of the legislature was necessary, and by the spring of 1897, two years after the original consolidation, preparations for the architectural competi-

tion were made. Dr. Billings, in company, with Mr. John L. Cadwalader, made careful examinations of many of the leading libraries of the United States during the first half of this year, Dr. Billings adding to this his European experiences gained in the preceding summer. On April 5, in Atlantic City, Billings outlined in pencil, as the basic idea for the architectural competition, the original sketch plan, from which Professor William Ware, of the Department of Architecture, Columbia University, developed the further plans.

A contract between the City of New York and the New York Public Library was signed and sealed on December 8, whereby the city agreed to construct and equip the building, while the library corporation undertook, on its part, to place and arrange its entire book collections in the building after its completion.

Meanwhile, Billings began the gigantic labors of supervising the reclassification and recataloguing of the books and pamphlets and their arrangement on the shelves. He recatalogued the entire collection on a uniform plan, making an author catalogue for official use; and, for public use, making, as he had done for the Surgeon-General's collection, an Index Catalogue of authors and subjects arranged in one alphabet.

The next year, 1900, was devoted to the question of the consolidation of the numerous free circulating libraries of the City with the New York Library. In due course consolidation was effected and, with a very generous donation of five million two hundred thousand dollars by Andrew Carnegie and the furnishing of sites by the City of New York, the erection of sixty-five branch libraries was made possible, in the various boroughs of New York City.

On May 23, 1911, the new building was formally opened to the public, the ceremonies being held in the rotunda in the presence of an audience of about six hundred persons. The procession, headed by Dr. Billings and Mr. Edwin H. Anderson, the Director, included Mr. Carnegie, Mr. Cadwalader, Mr. Rives and the other trustees, the Mayor of the City, the Governor of the State of New York and the President of the United States, Mr. Taft. Thus the last crowning achievement of this great man was completed.

The work upon which Billings' name and fame most securely rests is the Index Catalogue of the Library of the Surgeon-General's Office, but in his long and fruitful career there were many other chosen fields of activity—medical bibliography, hospital construction, hygiene and sanitary engineering, vital and medical statistics, and the advancement of medical education and medical literature, upon which only a brief comment can be made here.

In the field of construction Dr. Billings supervised the planning and administration of at least seven important structures—the Barnes Hospital in Washington; the Army Medical Museum; the Johns Hopkins Hospital; the Laboratory of Hygiene and the William Pepper Laboratory of Clinical Medicine in Philadelphia; the New York Public Library, and the Peter Bent Brigham Hospital in Boston. Of these, the Hospital in Baltimore, acknowledged after its opening to be the best of its kind in the world, established his reputation as a hospital constructor.

For a period of about twenty years, Billings was regarded as the authority on public hygiene in the United States; beginning with his report on the hygiene of the United States Army, and culminating in his appointment to the professorship of hygiene in the University of Pennsylvania. His addresses on state medicine before the American Public Health Association and other societies had great weight in their day. He reorganized the Marine Hospital Service, played an important part in handling the yellow-fever epidemic at Memphis in 1879, was the author of important bibliographies on cholera and alcoholism, many special reports on public hygiene and military medicine, a treatise on ventilation and heating, and three separate treatises on hygiene. During his whole official career, he was in constant demand as an expert advisor in the sanitation of cities and buildings and as a sanitary and ventilating engineer.

Billings was also an accomplished statistician. From 1878 until 1912 he had taken an active interest in the national census. His extensive and accurate reports on the vital and medical statistics of the United States in connection with the Census taking of 1880, 1890, and 1910 are monumental achievements.

In the development of American Medicine towards a more dignified status, exemplified in the Index Catalogue and the Johns Hopkins Hospital, he did as much as any man of

his time. His critical surveys of the status of American medicine in 1876 and 1886 displaced the old provincial standards and his "History of Surgery," published in 1895, is acknowledged as the best work on this subject in English.

In acknowledgment of the value of his work in science, Dr. Billings received many honorary degrees, being singularly honored by the Universities of Edinburgh LL.D., 1884; Harvard LL.D., 1886; Oxford LL.D., 1889; Munich M.D., 1889; Dublin M.D., 1892; Budapest M.D., 1896; Yale LL.D., 1901; and Johns Hopkins LL.D., 1902; and was made an active or honorary member in many medical and scientific societies. On April 17, 1883, he was elected to membership in the National Academy of Sciences, serving as its treasurer from 1887 to 1898 and on many of its committees. In 1902 the Carnegie Institution of Washington was incorporated, which by 1911 had acquired a total fund of twenty-two million dollars through the generosity of Mr. Carnegie. From 1903 until the time of his death, Dr. Billings was continuously Chairman of the Board of Trustees and served as a member of the Executive Committee from the date of its organization in 1902 to 1913.

Here has been sketched but briefly the history of the life of one who will ever be remembered for his valuable services to the country. Few who came in contact with him were aware that this strong, forceful, individual had to cope with more than his share of the ills of man. During the last two decades of his life, he suffered from both the cancerous and the calculous diatheses, and was eight times on the operating table, four of these being major operations. Between 1890 and 1892, he suffered from cancer of the lip, undergoing five operations for its removal, of which the last, performed by Dr. Halsted at Baltimore, was extensive and radical, involving removal of glands of the neck. In the last four years of his life, he had two patches of cutaneous epithelioma which were successfully treated with radium. In 1900 he was operated on for removal of a biliary calculus and in 1906 a cholecystectomy was done. He bore all these sufferings with fortitude and stoicism and never referred to any of them.

In 1913 he again went up for operation, the removal of another calculus, on March 4. For the first few days he rallied in a very encouraging manner. Pneumonia set in, however, and he grew weaker and died on the evening of the eleventh.

It is not easy to give an adequate idea of the man. Dr. Garrison has paid a beautiful tribute to his character and personality in his Memoir of John Shaw Billings:

"In the prime of his life Billings was a figure of powerful build and commanding appearance, with a handsome head, a straight, refined nose of the Napoleonic type, and clear open blue eyes. The whole man was in the strong, earnest look of those remarkable eyes, which, however dim they may have become in old age from long vigils of close night work, always retained something of the direct military glance. Even as a child he seems to have had the tendencies of the student and philosopher. Yet he was a man of affairs almost from boyhood up, spending his honorable youth as a soldier in the field, and more than half his life as a civil administrator of multifarious duties. Everything to be done, every public duty or private obligation was duly pigeon-holed in his mind, and all promises were faithfully kept and promptly performed. He was always sincere and whole hearted, and marvellous was the ease with which he disposed of the complex affairs with which he had to deal. His opinions were delivered with a remarkable, bold surety, downright and forthright, which sometimes produced the impression of 'snap judgments,' but he seldom went wrong. Few sentences went from his lips which did not wing the center of the target or near it, and he never wasted words in business. Thus he came to be looked up to and sought after everywhere as that rare thing in modern life, an absolutely reliable man. In his official life, he bound his co-workers and employees to himself, and set them an example, by this single trait of reliability, with all that it implies of honor and honesty and fair dealing.

"He was sometimes rugged and downright in his handling of affairs, a Viking, no doubt, but it is through the friends he attracted to himself that we must see his whole personality. There was absolutely nothing small or mean about him, and, in all his private relations, there was a vast amount of gentle sympathy, which was usually implied rather than expressed. No one could look into the eyes of this remarkable man for long together without realizing that he was in the presence of a personality of the first order, 'honest as the tides,' strong and tireless and reliable as nature, clean and pure as the great forces in nature."

MICHIGAN'S DEPARTMENT OF HEALTH

C. C. SLEMONS, Dr.P.H., M.D.,
Health Commissioner
LANSING, MICHIGAN

TYPHOID OUTBREAK IN BAY CITY

From an epidemiological viewpoint, the outbreak of typhoid fever that occurred during December, among guests at a Polish wedding in Bay City, proved to be a most interesting one. The Michigan Department of Health assisted the local health officer, Doctor G. W. Moore, in investigating the epidemic, the source of which was found to be a carrier.

Eighty persons attended the wedding dinner, and it is believed that at least ten cases of typhoid resulted, although only nine were positively diagnosed as such. One death occurred among these nine, and the tenth case, which also proved fatal, while not definitely diagnosed as typhoid, was considered, from circumstantial evidence, as probably typhoid.

Investigation of those who had any part in the preparation of the food served at the dinner exonerated the cook, a Polish cateress. She had no history of typhoid, and there was no evidence or history of typhoid having occurred among those attending the dinners for which she had previously cooked. Stool specimens from her were negative for typhoid bacilli. The carrier was finally discovered to be one of those who had helped prepare the dinner. This individual had had typhoid some years before, and three different stool specimens showed typhoid bacilli to be present.

MEASLES PREVENTION AND MODIFICATION

The possibilities of prevention or modification of measles after exposure is the subject of a letter sent by the Department to all practicing physicians in Michigan. More than the usual prevalence of measles is expected during the next three or four months in at least some parts of the state. The letter emphasizes the fact already announced in this section that the Michigan Department of Health now offers to physicians, without cost, ampules of sodium citrate solution to be used in the administration of whole adult blood to children who have been exposed to measles. This procedure is believed to be of very definite value and to give promise of saving a good many lives of children under the age of five.

BIOLOGIC PRODUCTS

Constant inquiries are received from physicians as to the biologic products furnished by the Bureau of Laboratories of the Michigan Department of Health. The complete list follows:

MANUFACTURED PRODUCTS:
(distributed free)

- Diphtheria antitoxin and toxoid.
- Schick test material.
- Dick test material.
- Scarlet fever strep. toxin, active immun.
- Scarlet fever streptococcus antitoxin.
- Smallpox vaccine.
- Typhoid vaccine.
- Tuberculin.
- Tetanus antitoxin (distrib. to State Inst.).
- Sodium citrate outfit for measles.
- Poliomyelitis convalescent serum.
- Silver nitrate ampules.
- Diagnostic sera.
- Bacterial antigens.
- Media (distributed at cost).
- Kahn antigen (distrib. free in Michigan).

AUTOGENOUS VACCINES:

- Preparation of streptococci and in exceptional cases for a few other organisms (fee is charged for preparation).

BACTERIOPHAGE:

- Prepared and distributed free in Michigan for staphylococcus, colon bacillus, B. typhosus, hemolytic streptococcus. Cultures are requested when etiology is in doubt.

RABIES VACCINE:

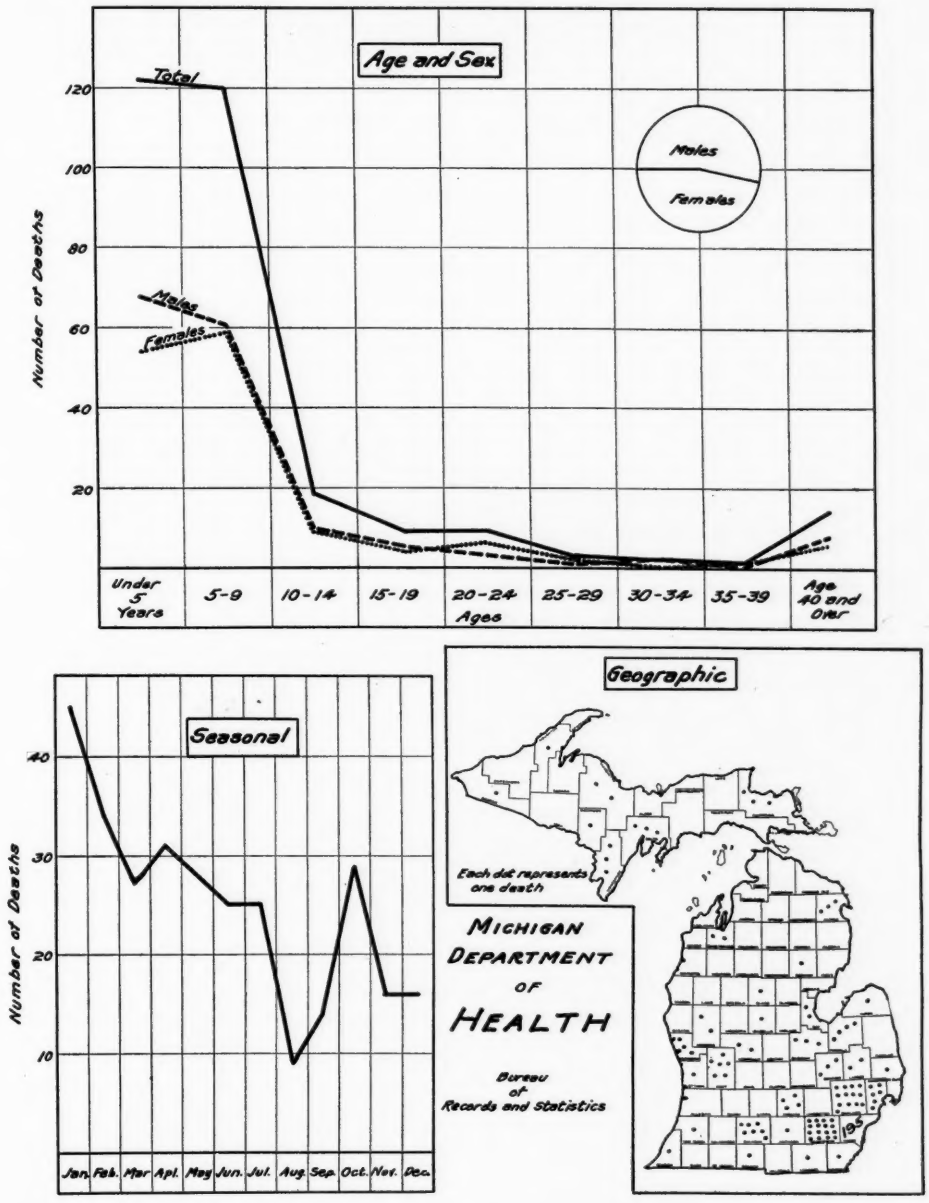
- Ready by April 1.

CHILD HYGIENE ACTIVITIES

Outstanding among the activities of the Bureau of Child Hygiene and Public Health Nursing for the month of December, was the completion of diphtheria immunization in Delta and Gratiot Counties. In Delta County, Miss Annette Fox, Nursing Director for the Upper Peninsula, was instrumental in securing a complete series of treatments for over 4,100 children. In some

DIPHTHERIA

The age, sex, seasonal and geographic distribution of 299 Deaths in Michigan in 1930



communities Miss Fox assisted the local doctors in giving the treatments and in others she aided local nurses in organizing for clinics.

In Gratiot County practically every doctor in the county gave generously of his services at the diphtheria prevention clinics organized by Miss Nell Lemmer. The doctors were paid out of an appropriation of $800 made by the supervisors last October. With a school population of 9,300 for the county, it was gratifying to note that approximately 7,100 children were given complete treatments.

Women's Classes in Bay County, conducted by Dr. Ida Alexander with an attendance of approximately 1,800 women, have been completed. Dr. Alexander was assisted in these classes by Helen Linn, who gave special talks on nutrition.

Dr. Muriel Case began her work with Women's Classes in Huron County during the week between Christmas and New Year's. In the little town of Ruth, in the

two hours' class held Monday afternoon, December 28, there was an attendance of 93.

Child Care Classes were completed by Miss Ferriby in Sanilac County in December and begun in Osceola County. Miss Bertha Cooper completed classes in Allegan County and started a new series in Van Buren County.

Miss Julia Clock spent approximately three weeks with Miss Martha Giltner, doing prenatal work in Berrien County. Miss Giltner had a total of 55 new prenatal patients for the month of December. Doctors and patients are availing themselves freely of Miss Giltner's services, with the result that a very constructive program is being made possible.

L.R.S.

SIGNIFICANT PROBLEMS IN ACUTE ANTERIOR POLIOMYELITIS

George Draper, New York, calls attention to the fact that although the researches of the past twenty years have exposed many of the complicated secrets of acute anterior poliomyelitis, there are still certain key points which remain unsolved. Of these the most pressing are, first, the exact way or ways of transmission; second, the sure diagnosis of the disease before the movement of invasion of the central nervous system; and, third, a satisfactory method of protective immunization. An answer to the first of these problems would quickly set at rest the present justifiable anxiety of parents, because a real step toward epidemic control would follow. The suspected healthy carrier and the unrecognized mild case not showing paralysis together form a combination which utterly defeats the ends of any but absolute quarantine of entire families. If, in addition to the now firmly established fact of direct transmission from person to person, there be added the possibility of raw food and milk borne infections, successful epidemic control is well nigh out of the question. Consequently, it is quite impossible to answer authoritatively the frequent parental query: "Shall I take the children away?" As matters stand it is doubtless best to advise that flight from a known focus usually is futile. There are too many instances in which, at the new location of hopes for safety, the fleeing family finds itself settled next door to a case which developed on the day of their arrival. Ordinarily it is better to remain in the infected area and rely on the skill of the aroused and alert physicians to make an early diagnosis and administer immune human serum. The second master key, which indeed is almost fashioned, is that which opens the diagnostic lock in the preparalytic stage. So far as the individual stricken child is concerned, the solution of this point may be the means of saving life or preventing paralysis. The scope and purpose of the author's paper, however, do not permit a discussion of the clinical picture of the systemic phase of the disease. There is a stage in the disease which precedes that of beginning muscle weakness in which there is clear clinical evidence that the anterior horn cells are already intoxicated though not yet seriously injured. This is the stage of ataxic tremor and muscle twitching. It seems to be analogous to the excitement stage of the experimental disease in monkeys. When this ataxic tremor sets in it is fair to assume that the virus has already entered into conjunction with the anterior horn cells. The physiologic effect of this first entry is one of stimulation. But since this union has been formed the moment may be too late to expect successful neutralizing effects from the serum. Consequently, these cases, should they go on to paralysis, will fail to support the therapeutic value of the serum. Clearly, then, the brief interval of time betwee nthe moment of choroid plxus penetration and the moment of virus-cell union "passage period" is the precious period during which the serum can be expected to nutralize the invading virus and so prevent paralysis. Not only is this period of short duration, but it is extremely difficult to place accurately in the course of the malady. The time relationships between the systemic phase, the "passage period" and the ataxic tremor phase are fairly well indicated by the correlation of clinical signs and spinal fluid observations. Furthermore, it has been definitely shown that immune human serum can block paralysis in monkeys infected with poliomyelitis virus. Having these facts at one's disposal, one should be able to prevent paralysis except in those comparatively few cases which display so slight and transient a systemic phase that the second or central nervous system phase arrives apparently as the first sign of illness. —*Journal A. M. A.*

MECHANICAL COMPRESSION OF SPINAL CORD BY TUMOROUS LEUKEMIC INFILTRATION

Hans H. Reese and William S. Middleton, Madison, Wis., report two cases of mechanical compression of the spinal cord by tumorous leukemic infiltration and one case of a localized leukemic infiltration of a peripheral nerve in the lower extremities. They state that children and young adults presenting a symptom-complex of paraplegic pseudoparalysis or complaining of painful conditions of the vertebral column should be examined for leukemia, the possibility of an aleukemic state being kept in mind. The paraplegias resulting from infiltrating masses of the peridural tissues do not differ from the known syndrome of spinal paraplegia. The first symptoms are persistent pain in the back, usually of sudden onset, radiating intermittently into the legs or girdlelike as in gastric crises. The lower extremities become heavy and stiff because of hypertonicity, and a spastic paretic gait is seen. The paravertebral muscles and the vertebræ are hypersensitive to pressure and percussion. This period of posterior root irritation ushers in the phase of progressive cord compression with paraparesis, segmental sensory disturbance, bladder retention and rectal incontinence, until a complete compression syndrome associated with trophic disturbances results. Rapid loss of weight, rise in temperature and severe prostration are important factors in differentiating clinically paraplegias of leukemic character from cases of cord compression due to other tumors. The initial blood pictures are not always indicative of the true illness, but soon the typical alteration and increase of blood cells makes the diagnosis certain. Spinal fluid examination with manometric studies is imperative in order to demonstrate the serologic changes and the compression syndrome. The cells of the spinal fluid should be examined in stained smears because pathologic cell forms may suggest the nature of the compressing agent.—*Journal A. M. A.*

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MARCH, 1932

"I hold every man a debtor to his profession, from the which as men of course do seek to receive countenance and profit, so ought they of duty to endeavor themselves, by way of amends, to be a help and ornament thereunto."

—Francis Bacon

EDITORIAL

COURTS AND DOCTORS*

This subject is one that of recent years has become of increasing interest to members of the medical profession. The enactment of Workingmen's Compensation Laws has resulted in bringing doctors into court as witnesses more frequently than in former years. In every state also there has been experienced an increase in the number of malpractice suits or charges of malpractice so that it behooves the practising physician to so conduct himself that his defenses shall always be in the highest degree complete if required. There is an old adage to the effect that ignorance of the law excuses no one. This little book is by an attorney of long years of experience in the conduct of cases on behalf of the medical profession of the State of New York. While it does not pretend to give an exhaustive treatment of the subject of medical jurisprudence, it contains much valuable and practical information on the subject, and we wish it might be read and assimilated by every physician.

The principles of medical ethics and professional conduct as enunciated by the American Medical Association emphasize the fact that medicine is not a business but a profession with its prime object the service it can render humanity with financial reward as a secondary consideration. The amount of gratuitous service rendered by the profession of Michigan is evidence that the medical men are fully cognizant of the high ideals set by them. The wise physician is a tactful person. He is slow or loath to criticize adversely, realizing that the impossibility of knowing all the facts in a given case demands that his attitude towards a brother practitioner should be characterized by generosity.

The impossible is not asked of any general physician. He is expected, however, to "keep abreast of the times" so far as the growing knowledge of his profession is concerned. He should exercise reasonable care and diligence in the pursuit of his professional work. His implied contract with his patient does not guarantee a good result, but he should use his best judgment in an effort to secure a good result. More, however, is required of him who holds himself out as a specialist. The specialist is defined as one "who applied himself to the study and practice of some particular branch of his profession." The physician who holds himself out as being particularly versed in some particular branch of medicine is expected to possess such knowledge and skill as that of the average specialist. In either case he must use his best judgment, which is defined as the faculty of "deciding wisely."

Whatever shortcomings may befall us are more often the result of insufficient care than lack of knowledge. Each contact with the patient should be occasion for further study whereby he should be considered not only as a *case* but a *personality* as well.

*Courts and Doctors, by Lloyd Paul Stryker. The Macmillan Company Publishers, New York. Pages, 236. Price, $2.00.

One should keep himself abreast of the times by diligent reading of medical books and journals, by constant or at least frequent attendance on his county and state medical society meetings and by post-graduate courses in which he should be an active as well as passive factor.

The patient has also his duty towards his physician. The relation not by any means one-sided. Without the coöperation of the patient no satisfactory result can be expected. The non-coöperating patient is guilty of contributory negligence in the event of an unsatisfactory result. Mr. Stryker in his well documented book cites judicial opinions which emphasize the importance of co-operation on the part of the patient. Among the duties of the patient mentioned is that of returning from time to time for treatment as directed by the physician. If after several visits to the physician the patient stops coming though instructed to return, his act is construed as contributory negligence.

The chapter on privileged communications should be thoroughly studied. Almost daily many physicians are approached by insurance companies for information obtained by them in their professional relations with patients. It is of paramount importance for physicians to know their rights in such matters under the law.

Chapter III of the book discusses the subject of Action for Malpractice in which we have analyzed the elements of the action, expert testimony, the physician's responsibility for the acts of nurses, internes and other doctors, operations without consent, abandonment, statutes of limitation, the work of testifying. All of these subjects are of paramount interest.

This somewhat lengthy editorial review is made because we believe the physician should know where he stands with his practice in the eyes of the law. In his preface the author says that in the State of New York there were in 1930 an increase in malpractice suits of 256 more than in 1929, making one malpractice suit for every twenty-two members of the Society. There has been reported in Michigan also a marked increase in 1930 over any previous year. The number may be diminished in the future if physicians will become better informed on the legal side of medicine and surgery and conduct their practice according to their best knowledge.

ROENTGENOLOGY AS A SPECIALTY*

An important institution in connection with the American Roentgen Ray Society is the Annual Caldwell lecture which is delivered each year by some outstanding member of the medical profession. The 1931 lecture bears the title of Roentgenology as a Specialty, by Prof. Dr. George Fedor Haenisch of the University of Hamburg, Germany. Roentgenology is defined as a medical specialty comprising diagnosis and X-ray therapy. During the early years following the discovery in 1895, the technical side predominated in which emphasis was placed upon the work of the physicist and the photographer. Physicians began to see possibilities in the development of the new discovery with the result that it became a medical specialty. Even today the speaker maintains that technic is over-estimated while the really more important medical aspect is viewed as unimportant. (Parenthetically, however, the late Dr. P. M. Hickey was accustomed to stress the importance of the finest quality in the production of radiographs.) A correct diagnosis is possible in many cases only when radiographs are made so as to show the pathology in the greatest detail and with the minimum of distortion. Dr. Haenisch, however, stresses the fact that a radiograph is not a picture or photograph to be interpreted as such. Roentgenography has, he maintains, nothing in common with photography except the employment of a sensitive emulsion.

Physicians eventually learned that a knowledge of osteology was not sufficient and that, "Roentgenographical osteology" demands an altogether different knowledge of normal variation, anomalies, age differences than was till then required for the practice of the physician and surgeon. They were not only required to familiarize themselves with geometric and physical laws and the mechanical problems of apparatus but to attempt the most difficult task, which was that of interpretation with the analysis of differences in densities as projected upon a plane surface by the X-rays passing through the body. Such was the beginning of the specialty which at first confined itself to the

*This lecture appeared in the December, 1931, number of the American Journal of Roentgenology, edited by Dr. Lawrence Reynolds of Detroit.

apprehension of foreign bodies and the diagnosis of bone injuries.

Dr. Haenisch mentions a number of obstacles encountered in the evolution of roentgenology as a specialty—among them the improvement of apparatus which took the technic of making the radiograph out of the field of art and made it mechanical, so that it was no longer the possession of the few. This led to a wider use of X-ray apparatus with diminished emphasis on the diagnostic feature. Anyone in possession of an X-ray equipment could make "pictures" which anyone was presumed to be able to interpret. He deplores the tendency of certain manufacturers of apparatus to place as many machines as possible. "When roentgenology will have become universal among general practitioners the consequent lowering of demands made upon apparatus and upon the operator's skill and knowledge will result in a deterioration of the quality and in an arrest of the progress and the development of the art." And again, many hospitals placed the X-ray department in the hands of technicians who made so-called "X-ray photographs" for the staff to interpret. "Even the most efficient roentgen technician can as little take the place of the well trained medical roentgenologist as a good operating room nurse or orderly can supplant the surgeon." Interpretation of radiographs is by no means easy or obvious; it must be learned laboriously, the greatest difficulty being to gauge the limits of one's own knowledge and skill.

The essayist goes on to deprecate the roentgenologist-clinician or the clinician-roentgenologist. "There is no place," he says, "where the union of eminent clinician and eminent roentgenologist in one person has existed for a long period. One of the two subjects must suffer because each requires the full-time and energy of an individual. The rapid development and extensive domain of roentgenology require the complete absorption of a person in it, especially if he is anxious to have a part in research and in its further development."

The professor emphasizes the fact that the roentgenologist is a consulting physician and should be treated as such. His professional relations are wholly with the referring physician, never with the patient.

This presentation of Dr. Haenisch's views on roentgenology as a specialty has emphasized the diagnostic phase of the subject. He is equally outspoken in the opinion that radiotherapy should be undertaken only by those who are especially trained for such work.

THE VALUE OF EDUCATION

Germany of the past has been voted by universal consent the best educated country in the world. According to recent press dispatches, German students have been warned that there is little or no prospect of gainful employment on graduating from the universities. Again, it has been rumored that a goodly number of the Berlin police are university graduates. Higher education has become very popular in both the United States and Canada, especially during the past three decades. There are large numbers of young men and women with University degrees who are seeking employment. Many are led to question whether higher education is really worth while. The answer depends upon what one considers the criterion of a good education. Are there not other rewards of education than dollars? President Fyfe of Queen's University, Kingston, Canada, thinks one of the best criteria of a good education is appreciation. The uneducated man is undeveloped, he says, and, therefore, largely insensate. He is blind to many forms of beauty and deaf to many kinds of truth. The object of education is to widen the scope and variety of appreciation and thereby to add to the human store of pleasure and of interest. Speaking of "useful knowledge," Dr. Fyfe says that no knowledge is useful unless it retains its use in any sphere of life. Therefore, it matters not what one's trade, profession or occupation, the function of the college is to produce men who will carry into any calling the appreciation of various forms of truth, beauty and of human character.

True there are:

> Some dull conceited hashes
> Who confuse their brains in college classes,
> They gang in stirks and come out asses,
> Plain truth to speak,
> And sine they think to climb Parnassus,
> By dint of Greek.

But if we accept the criterion of higher education as held by Dr. Fyfe it is worth while under any circumstances for those who are able to profit by it.

MOIST NOT WET

The use of wine is as old as civilization and the persiflage regarding the effects and the "morning after" are apparently as old as the beverage itself. Oliver Wendell Holmes wrote of the "soft convivial glow unaided o'er me stealing." One writer gave four reasons why men drink, namely,

"Good wine, Friends,
Because I'm dry
And any other reason why."

Plato, in the fourth century B. C., writes on the subject of wine and its social effects in his dialogue the Symposium as follows:

After Socrates and the rest had finished supper, and had reclined back on their couches, and the libations had been poured forth, and they had sung hymns to the god, and all other rites which are customary had been performed, they turned to drinking. Then Pausanias made this kind of proposal.

"Come, my friends," said he, "in what manner will it be pleasantest for us to drink? I must confess to you that, in reality, I am not very well from the wine we drank last night, and I have need of some intermission. I suspect that most of you are in the same condition, for you were here yesterday. Now, consider how we shall drink most easily and comfortably."

"'Tis a good proposal, Pausanias," said Aristophanes, "to contrive, in some way or other, to place moderation in our cups. I was one of those who were drenched last night."

Eryximachus, the son of Acumenius, hearing this, said: "I am of your opinion; I only wish to know one thing—whether Agathon is in the humour for hard drinking?"

"Not at all," replied Agathon, "I confess that I am not able to drink much this evening."

"It is an excellent thing for us," replied Eryximachus, "I mean myself, Aristodemus, Phaedrus, and these others, if you who are such invincible drinkers, now refuse to drink. I ought to except Socrates, for he is capable of drinking everything, or nothing; and whatever we shall determine will equally suit him. Since, then, no one present has any desire to drink much wine, I shall perhaps give less offense if I declare the nature of drunkenness. The science of medicine teaches us that drunkenness is very pernicious; nor would I choose to drink immoderately myself, or counsel another to do so, especially if he had been drunk the night before."

"Yes," said Phaedrus, the Myrinusian, interrupting him, "I have been accustomed to confide in you, especially in your directions concerning medicine; and I would now willingly do so, if the rest will do the same."

All then agreed that they would drink at this present banquet not for drunkenness, but for pleasure.

BIRTH CONTROL

Among the papers read at the one hundred and eleventh annual meeting of the Michigan State Medical Society at Pontiac, is one by Dr. H. S. Collisi of Grand Rapids, entitled "Sociological Aspects of Contraception," in which the writer discusses a subject that has hitherto received more publicity in the lay than in the medical press. While technically it may be a medical subject, it is mainly in the domain of sociology. Much that has been presented on the subject has been by the Church, and, until very recently, mainly in opposition to the artificial control of population.

Dr. Collisi notes first the emancipation of woman as seen in her equal right with man to the franchise and her competition with him in many departments of business and professional activity. He discusses what he calls her right to determine her own sex life. Time was, and not so very long ago, when woman lived a protected life; her sphere was confined to the home. Business and professional positions were virtually closed to her. Now all is different; she has entered fields of occupation in which she is compelled to support herself. The essayist thinks it is "an evolutionary movement for race betterment," which "ultimately means race control." He refers to the fact that legislation and religious progress have not kept pace with the evolutionary advance. Perhaps. Some nations, however, have revised their laws to conform to the trend of the times and he sees evidence of this tendency in others.

According to Dr. Collisi, in 1929 there were twenty-nine birth control clinics in the United States "proclaiming the rights of women in the 'prevention of conception for social reasons.'" In 1931, the number has increased to eighty-one, located in seventeen different states. The argument that birth control will seriously diminish the birth rate is answered by the situation in Holland, Switzerland and Soviet Russia, where it prevails with no apparent detrimental decrease in population.

The value of permanent sterilization in the case of mental defectives and confirmed criminals would seem beyond question. It would be not only a measure of safety to the normal population but it would be a great economic movement. Dr. Collisi cites one family studied by a Swiss physician in which, in five generations, eight hundred and thirty-four persons descended from one mentally defective female. The descendants included seven murderers and sixty-four others who were imprisoned for various offenses totalling one-hundred and sixteen years imprisonment. The total cost to the state was estimated as approximating $1,200,000. The notorious Jukes family is a

classical example of a similar result in this country. Heredity is a powerful factor in racial evolution. One cannot gather figs of thistles.

The medical profession have a duty to perform in pointing out the harmful as well as the beneficial effects of birth control upon the health of the prospective mother as well as its ultimate effect upon society. "The medical profession and the state should work in harmony in determining the best scientific and legal procedures," writes Dr. Collisi. In this we heartily concur. While it is a subject on which medical opinion should be sought, birth control is, as we have said, largely a social or sociological matter. It is one in which, like prohibition, not much will be accomplished in moving too far in advance of public opinion.

Dr. Collisi's paper has presented a subject about which, editorially, we prefer to preserve an open mind. We have no editorial policy to announce regarding it. Birth control has probably always been practiced by those who, owing to their favorable economic circumstances, might not have limited their families and it has been wholly disregarded by those who, for the sake of the family and the nation, might better have exercised restraint.

A BIT OF MEDICAL HISTORY

(HIPPOCRATES AND CONTEMPORARY PHILOSOPHERS)

Hippocrates, according to Celsus, separated medicine from philosophy, just as Socrates was accredited with bringing philosophy down from heaven to serve mankind. In other words he turned the minds of men from vague speculations on the heavenly bodies to study for the purpose of clarifying their own ideas. To know oneself was the object of the thinker of the golden age. So Hippocrates turned men's minds from speculation about disease to careful observation of the phenomena of disease. He initiated the inductive method —the enunciation of a general rule from the observation of particulars. Galen gave us the deductive method, the method of trial by experiment. One deals with facts already in existence; the other creates facts as needed. The induction method of Hippocrates—observation and inference—must be the starting point of medical research. This, of course, must be supplemented many times by the deductive or experimental method of Galen. The latter method is one by which the conclusions of the former may be tested. The inductive method is commonly associated with the name of Francis Bacon, who emphasized the idea of generalization. "The mind," he said, "had a yearning which makes it dart forth to generalities, that it may have something to rest in; and after a little dalliance with experience becomes weary of it." Hippocrates, however, was not trying to work out a logical instrument of scientific investigation. He hit upon it by fortuitous circumstance. He was a practising physician with little interest other than to restore sick people to health. Bacon's interest was in the method rather than in any practical application that might be made of it. His was the reflecting mind; that of Hippocrates was the observing mind.

The Greeks held to the belief that extremes were always to be avoided. "Nothing in excess" was their motto. Imbued with this philosophy Hippocrates considered that excess of health was akin to disease. He maintained that medical aid should be withheld from those who are incurably ill, reserving it for those who could be cured or in whom the severe attacks of disease might be mitigated. Medicine like every other art had its limits.

* * *

Hippocrates refused to believe, according to the custom of the time, that any disease was sacred or divine. Epilepsy was considered the "Sacred Disease" according to popular superstition, which held it to be of divine origin. Everything according to Hippocrates was divine, and everything human. It was unreasonable to call one disease more divine than another.

The Four Humors, he maintained, were intimately associated with seasonal and climatic variations. The phlegm, a cold and moist humor originating in the brain, is associated with winter; yellow bile is associated with summer; it was a warm and dry humor derived from the liver. In the spring the blood gave rise to inflammatory diseases. It was the warm and moist humor originating in the heart. Black bile was presumed to arise from the spleen; it was a cold and dry humor connected with the ailments of that organ.

Greek writers as a rule were reticent about their contemporaries so in the writings of Hippocrates only two are mentioned by name, namely, Mellissus, the admiral of Samos, who defeated the Athenian fleet in 441 B. C., and Empedocles. On the other hand, we are surprised at the scant reference to Hippocrates in classic Greek literature, mention being made of him only once or twice by Plato and Aristotle. The *Zeitgeist,* however, has its innings whether definite mention or not be made of contemporary philosophers. The influence of such men as Pythagoras, Heraclitus, Anaxagoras and Democritus are to be traced in the writings of Hippocrates. Pythagoras laid great stress on the number 7 which possessed almost a mystical sanctity for him. The seven month child was expected to live, but not an eight month child. Hippocrates' reverence for the number 7 amounted almost to an obsession. The great stress placed upon the importance of proper diet is also traceable to Pythagorean influence.

Heraclitus influenced Hippocrates even more than did Pythagoras. He was born at Ephesus in 535 B. C., about seventy years before Hippocrates. Heraclitus was a pronounced aristocrat and lived largely by himself. He was known as "the weeping philosopher." He taught that it was not the knowledge of many things that mattered so much as the accurate knowledge of only one thing. The word (λογος) or the ultimate truth was the perception of the unity underlying things apparently opposed to one another. The apparent strife of opposites was due to the tension which held the world together. "All things are in a state of flux." "No one has ever bathed twice in the same stream; for different waters are constantly flowing down; it dissipates its waters and gathers them again—it approaches and recedes; it overflows and falls." "All is motion, there is no rest or quietude." Such is the philosophy of motion.

* * *

The Eleatic school taught the philosophy of rest. We see how, at this early time, Heraclitus anticipated the teachings of modern science. With the views of Heraclitus contrast Hippocrates, "All things are passing, both human and divine, upwards and downwards by exchanges." Human beings are in flux as is everything in the world. We are never the same for two consecutive moments.

The influence of the Eleatic school of philosophy upon Hippocrates was on the whole negative; except that it served to stimulate his opposition. Parmenides, the most outstanding member, taught that the ultimate form of matter was one eternal substance which is neither generated nor destroyed. He opposed the ordinary common sense notion which believed in the world as perceived by the senses, for to him the doctrine of motion was absolutely false. To him, *Being* was unchangeable as well as eternal. Melissus, who was an understudy of Parmenides and the systematizer of the Eleatic school, was strongly opposed by Hippocrates. The Eleatic school excited his opposition in as much as it seemed to him incompatible with his observations of the phenomena of disease.

It was unfavorable to any advance in medicine, for it seemed to render impossible all knowledge of disease.

* * *

Next to Heraclitus is Empedocles, whom Hippocrates mentions by name. He was a statesman, orator, poet, physician and mystic. He was born in Sicily about 500 B. C. Regarding him Matthew Arnold* wrote:

"Thou hast heard all men speaking of Pantheia,
The woman who at Agrigentum lay,
Thirty long days in a cold trance of death,
And whom Empedocles called back to life.

* * *

He could stay swift diseases in old days,
Chain madmen by the music of his lyre,
Cleanse to sweet airs the breath of poisonous streams."

Empedocles made a number of discoveries in biology. He described the labyrinth of the ear by dissecting the ears of goats. He also observed that in plants there were the two sexes combined. He wrote fairly extensively on medical subjects and anticipated the theory of evolution for he maintained that the more perfect proceeded from the less perfect.

Empedocles taught the doctrines of the four elements, earth, air, fire and water, which he considered ultimate. They were "elements" to the ancient Greek philosophic mind, as the chemical elements are to the modern. It was these elements which Hippocrates identified as hot and cold, moist and dry, from which come the four humors, blood, phlegm, yellow bile and black bile, to which we have already referred. A proper mingling of these according to him deter-

*Empedocles on Etna. Matthew Arnold.

mined health and disease. Empedocles, unlike the Eleatics, believed in change and motion. He regarded the heart as the organ of consciousness. Here he proved inferior to Hippocrates, who attributed all intellctual and moral functions to the brain. Hippocrates and the Coan school regarded the brain the seat of mental disorders whereas the Sicilian school of Empedocles claimed their origin in the heart.

* * *

And lastly, of contemporary philosophers might be mentioned Democritus whose name is associated with the enunciation of the atomic theory. In common with most thinkers of the time, Democritus wrote also on medicine. Some of his bizarre theories were shared by Hippocrates. However, we quote the following letter, reputed to be from Democritus to Hippocrates: "All men ought, O Hippocrates, to know the art of medicine and particularly those who have received some education, for it is at once a fine thing and useful in life. I am of the opinion that the knowledge of philosophy is sister to that of medicine and dwells under the same roof; indeed, philosophy delivers the soul from passions and medicine removes disease from the body. The mind grows as long as health is present, which a wise man should take care of, but when the body suffers the mind no longer troubles about the practice of virtue, for disease darkens the soul terribly by the sympathy it has with the intelligence."

LITTLE BUT GRAVES, WORMS AND EPITAPHS

(Manchester Guardian)

The less said about 1931 the better. It has been full of crises and disorders and bankruptcies; and it is doubtful if European civilization could sustain many more such years. News has been only of disasters; and if there exists in the world any piece of territory whose inhabitants have not been distraught by economic difficulties it must lie in so remote a place as to be unaffected by prevailing tendencies and independent of general price levels. Perhaps, in some oasis in the very heart of the Sahara, dates may still be gathered and eaten and digested by the hungry irrespective of quotations on the stock exchanges; perhaps forgotten in some African jungle, savages may still go about their customary occupations without leaving some of their number to sit in hungry idleness while the others pile up quantities of food and clothing that none may eat or wear. If it is indeed so, then bedouins and savages enjoy privileges denied to the civilized man. That unfortunate, as means of production improve, as the earth is made more fruitful and the machines more competent, finds himself in an ever more miserable plight. Unable to dispose of what he makes, he is left, in increasing numbers, without work and without wages. Such a famine of plenty has prevailed throughout 1931. Is it to go on throughtout 1932? The answer rests with those in authority. They alone have the power to order things differently. And it must be admitted that their past performances and their latest statements of policy do not encourage the hope that they will easily solve in 1932 the problems that have so completely baffled them in 1931.

CARRYING ON

Life began on the earth in a pool of rain water beside a volcano, says a Swedish geologist, the chemical action of the water on the volcanic ash making possible the spontaneous appearance of protoplasm.

In a steamy saline pool
When the earth was getting cool,
Years before the time of Noah,
Samson, Solomon and Sheba,
Lived a primitive ameba,
First of all the Protozoa.
Mother, father had he none;
Water, salt and proper heat
Generated him complete.
Thus was early life begun.

Earth was then a dreadful dump,
Nature in a total slump,
Cinders, cinders everywhere,
Everywhere volcanoes blowing
All the world to Tophet going!
Did our little friend despair?
When the country quaked and slid
In the elemental stew,
Did he feel extremely blue?
Very probably he did.

Notwithstanding, all the same,
He was nervy, he was game.
All his courage he recruited,
And he cried, "Am I a lily?
Guess again!" and bravely still he
Carried on and evoluted.
Hence we have the hen, the jay,
Lions, butterflies and lambs,
Cows and horses, flounders, clams,
And the human race today.

Now, the moral point of this
Hardly any one can miss.
If that plucky little early
Protozoan in his puddle
Persevered amid the muddle
Of the primal hurly-burly—
If a mere ameba thus
Rose above a world depression
And continued on in session,
Maybe there is hope for us.

—*The New York Times.*

HELPLESSNESS

A'm no askin' ony questions an' a'm no requiring ony body tae answer ony ah do ask, bit a'm wonderin' aw'fu' hard like, if we're nae gaitherin' a lot o' habits wha's a' th' time increasin' oor helplessness.

Mon! bit a'm sometimes thinkin' that we'll soon no be able tae turn roond in oor ain hame, wi'oot somebody tellin' us we're nae doin' it in th' technical way. Aye! an' we're nae able ony mair tae roll oor ain cigarettes, nor tae light th' matches tae set fire tae them.

An' we're no able tae entertain oorsels th' noo. We hae tae tak what comes tae us frae th' cannin' factories o' music, or pick oot o' th' cloods th'

weepin' an' wailin' o' a lot o' jass whinners, wha is nae sae guid as oor ain croonin' wid be if we anly regained oor auld habits. Of course we can play th' cairds, bit we're nae responsible for th' cairds we hold, whas gi'en tae us by a maun whas nae tryin' tae gi' us guid anes.

When ah wis a wee laddie at hame, ane o' ma jobs on a saturday aifternoon was tae gaither a' th' family shoes th'gither an' black an' polish them, heels an' a,' for th' sabbath Kirk goin', bit we're sae helpless th' noo that we hae tae gang intil a foreign man's place an' spend monie tae hae him dae it for us.

An' we're haein' a lot o' shemen th' noo, wha sit in a barber chair whiles th' barber shaves his face, an' th' colored maun blacks his shoon, an th' lady wi' painted hair polishes his nails. Bit th' thing that ma's us mair useless than ony thing else th' noo is th' sliced bread we hae tae tak frae oor grocer. Weel, a'm tellin' ye, a'm nae for it. Th' slices are too thin.

Noo days when a lady is ga'in tae hae a baby, she has tae hae a hospital, a nurse, an operatin' room, an anesthetist, a barber an' ither flunkies besides th' docter. But ah mind th' nicht when a mither gat oop against ma orders an' gi'ed me a haund tae wash an' dress th' bairn, then washed hersel an' gat back intil a clean fresh bed where we snuggled her awa wi' th' bairn at her bosom. Then she patted me on th' airm, an' kin' o' shy like, whispered that th' monie wis hidden awa ahint th' clock. MON! bit there's a lot o' you chaps th' noo, wha wid wash an' dress twa babies tae hae a young mither pat ye on th' airm,—especially if she telt ye where th' mony was.—Ah weel,—Guid Nicht.

WEELUM.

OBITUARY

DR. ROY W. GRISWOLD

Dr. Roy W. Griswold, of Freeport, died December 25 at Pennock Hospital. He was born at Kendall, New York, in 1873. Dr. Griswold graduated from the Detroit College of Medicine in 1898. He spent several years on the staff of Walter Reade Hospital, Washington, D. C., came to Freeport twelve years ago. He is survived by his wife, Clara L. Griswold, one sister, Mrs. Walter Pease of Morton, New York, and two stepdaughters, Mrs. G. W. Kilgus of Manhasset, L. I., and Mrs. W. A. Seifert of Freeport.

DR. EDWIN E. HUBBARD

Dr. Edwin E. Hubbard of Dearborn died at Harper Hospital, Detroit, December 29, 1931, following a long illness, nephritis. Deceased was born at Adrain in 1897. He received his early education in the village of Wayne, the Wayne High School, and later the Michigan State Normal College. He attended and graduated from the Detroit College of Medicine in 1923 and began practice in Dearborn in 1924. He had been active in municipal affairs during the past eight years. Dr. Hubbard also was a member of the Wayne Blue Lodge, F. and A. M.; Olive Branch Masonic Chapter, Detroit Consistory, Dearborn Lodge, Loyal Order of Moose; Fordson Lodge, I. O. O. F.; Dearborn Chapter, Order of Eastern Star; Wayne, Michigan State and American Medical Societies; the Fordson Rotary Club and the Captain Phelps Collins Post, American Legion. Besides his widow, Ruth E., he is survived by a son, Charles Edwin, two years old. His parents, Mr. and Mrs. Freeman Hubbard, were pioneer residents of Wayne. They died two years ago.

GENERAL NEWS AND ANNOUNCEMENTS

Mr. George Doty, father of Dr. C. A. Doty of Detroit, died on February 12 at the advanced age of 82 years, at his home at Lacota, near Kalamazoo.

Dr. Angus McLean of Detroit, addressed the West Side Medical Society on February 18 on the subject of Economic Phases of Medical Practice.

Dr. William Dugan of Battle Creek is pursuing post-graduate work in surgery at the Charity Hospital, New Orleans. He will return to Battle Creek late in the spring.

Wm. J. Burns, Executive Secretary of the Wayne County Medical Society, Detroit, has been invited to speak before the Shawnee County Medical Society of Topeka, Kansas, on Monday, March 7, 1932.

As a movement toward civic economy on the part of both city and county, it has been suggested that the county of Wayne take over the Herman Kiefer Hospital and the Maybury Tuberculosis Sanatorium.

Dr. William Clift, who came to Detroit and established an X-ray practice following the close of the war, has returned to Flint, where he has been appointed roentgenologist to the Hurley Hospital.

Dr. William J. Stapleton, Jr., Chairman of the Committee on Medical Defense, has moved his office from Fort St., Detroit, to 641 David Whitney Bldg., Detroit, adjacent to the office of the editor of this Journal.

The Council of the Wayne County Medical Society has decided that a joint research be established with The Detroit Edison Company on "The effects of radiant energy on matter as pertaining to the practice of medicine."

Dr. Plinn F. Morse, pathologist of Harper Hospital, Detroit, addressed the Calhoun County Medical Society on February 2 on the subject of Parathyroid Dysfunction. Dr. A. H. Kirtchner at the same meeting spoke on the subject of Ovarian Hemorrhage.

"The Diagnosis and Treatment of Tuberculosis in Children," was the subject of an address by Dr. Henry D. Chadwick of the Herman Kiefer Hospital, Detroit, before the Genesee County Medical Society on January 20.

Dr. H. R. Carstens of Detroit addressed the Genesee County Medical Society on the subject of European Hospitals. Dr. Carsten's address was in the form of an illustrated travelogue based upon first hand experience in the countries of western Europe.

Dr. Thomas L. Patterson, professor of physiology of the Detroit College of Medicine and Surgery, at 1512 St. Antoine St., Detroit, has been awarded a prize of $250 from the New York Academy of Science for a paper on the "comparative physiology of the gastric hunger mechanism." This prize, called the A. A. Cressy Morrison Award, is given for the most acceptable paper on experimental biology embodying original research not previously published.

The Wayne County Medical Society has organized a medical and a surgical group to include all men under forty years of age. These meet at the Society club rooms on Tuesday and Friday noons, dine and indulge in the discussion of professional papers of interest to the study club. Recently has been organized a group of those who have been in practice over a quarter of a century. These "aged" ones display the enthusiasm of youth. We propose the organization of a "nondescript" club so that no one will be left out in the cold.

The Beaumont Foundation under the auspices of the Wayne County Medical Society are making preparations for an observance of the 100th anniversary of the publication of the first edition of Beaumont's epoch-making work on digestion. The 100th anniversary will be in 1933. While this Foundation is named after Beaumont the celebration of the event of the publication of his work might well also engage the attention of the Michigan State Medical Society. The present Beaumont Foundation lectures given by Dr. Lewis of the medical department of the University of Michigan are the 11th in the series. This feature of the Wayne County Medical Society has become popular among the medical profession so that many welcome guests are present each year from the county societies more or less distant from Wayne.

A half century of medical service is completed March 2 by Dr. Hugo Erichsen, of Birmingham. On that date 50 years ago Dr. Erichsen graduated from the Detroit Medical College. At the beginning of his career he was an editor of the Detroit Clinic and associate editor of the Western Medical Reporter. From 1883 to 1885 he was professor of neurology at Chaddock College, Quincy, Ill. Under the title, "Medical Rhymes," he published an anthology of medical verse in 1884, and since has written dissertations on medicine. Following his association with Dr. John Henry Carstens, he entered the Detroit City Physician's office in 1889. For 19 years he was a medical staff member at Parke, Davis & Co., and for two years was director of medical service for the Burroughs Adding Machine Co.

Dr. Erichsen holds degrees from the University of Vermont and the Royal College of Physicians and Surgeons, Queen's University, Kingston, Ont. He is a member of the Oakland County Medical Society. —*Detroit Free Press.*

OAKLAND COUNTY MEDICAL SOCIETY PRESIDENT

The election of Dr. Charles A. Neafie, Director of Public Health, City of Pontiac, President of the Oakland County Medical Society, has brought into the executive chair the member best informed in events of the society. This election so makes the Councillor from this district the county president. In addition, the new incumbent unofficially serves the society as its historian.

After a resident in Oakland County of three years, Dr. Neafie joined the society in the December, 1915, meeting in a class with Drs. Foley, Knapp and Mercer. He was first inducted into office in 1919, when he served one year as secretary-treasurer. At the expiration of his term from his suggestion this position was divided into two offices.

From 1927 continuously until 1930, Dr. Neafie occupied the secretaryship. It was during this period that the society's bulletin, which had appeared in 1912 under Dr. Jos. B. Chapman for a few issues, was republished as a mimeograph folder. After two years it was brought to its present pamphlet, printed form, self sustaining from advertising. In 1931 he was elected to serve as councillor, 15th District, in the Michigan State Medical Society, for a term of four years.

Besides association in the American Medical affiliants, Dr. Neafie is a member of the several public health societies culminating in the International Association of Medical Health Officers, two of which he has served as president. As a vocation he is gathering from all available records and from interviews with oldest residents historical material by decades of the approximately 1,000 medical men who have practiced in the county since its first settlement in 1817.

One of Dr. Neafie's noteworthy contributions to the society was a series of historical sketches of these pioneer medical men appearing in the local press several months ago.

Most significant to Dr. Neafie of the changes occuring in the society has been in the increase in cordial relations between members. So discordant was the society in the nineties that for a period of ten years no president was elected, neither faction being willing for such honor to be placed elsewhere. In the sixteen years of Dr. Neafie's experiences this feeling gradually has given place to one of harmony and united purpose. Parelleling this has been an increase in scientific interest. Scientific meetings have increased from two to ten yearly, in addition to three or four social seasons. Numerically during this period the society has more than trebled.

The practitioner of the future, Dr. Neafie believes, will find increasing emphasis resting upon preventative medicine in the broadest sense. Before the society's immediate attention is the matter of medical care during the current unfortunate period for the truly indigent, which Dr. Neafie shows the society has never failed fittingly to meet. With interest is awaited by the Council of the State Society the report of the special committee to investigate activities of agencies administering to the public health, inaugurated at the last state meeting.—*Bulletin of the Oakland County Medical Society.*

DR. JOHN E. CLARK HONORED

Dr. John E. Clark of the class of 1877, University of Michigan Medical School, was the honored guest at a testimonial luncheon sponsored by the "Seniors Club" of the Wayne County Medical Society, Detroit, Friday, February 12 (Lincoln's birthday), in the new club roms of the Society. Dr. Clark is still in active practice and goes to his office daily. He has been County Chemist for thirty-five years. He joined the Wayne County Medical Society in 1878 —fifty-four years ago—and is the oldest living member. The "Seniors Club," an organization composed of physicians and surgeons who have been in practice twenty-five years or more, has a membership of two hundred and seventy-five. The Club honored Dr. Clark because of his wonderful contribution to the good health of the community during the past half century, as well as for his untiring efforts to aid organized medicine in Michigan. Dr. H. A. Luce, Secretary of the Seniors, sponsored the idea of giving honor to its distinguished member, Dr. Clark.

Seventy-three physicians were present at the Clark testimonial. Dr. Louis J. Hirschman acted as toastmaster. Brief addresses were made by Dr. H. W. Plaggemeyer, President of the Wayne County Medical Society, who presented a Life Membership to Dr. Clark; Dr. O. S. Armstrong, who was graduated with Dr. Clark in the class of 1877, University of Michigan; Dr. Walter Cree, who is Dr. Clark's oldest living student; Dr. C. G. Jennings, and Dr.

Basil Connelly, representing the Noon-Day Study Club. Dr. Clark answered the eulogies, and in a thirty minute address delighted his many friends with reminiscences of medical practice in the "good old days." Telegrams of congratulation from many distinguished people throughout the country were read at the luncheon.

Among those present and the year they were graduated from medical school were: Drs. John E. Clark, 1877; Louis J. Hirschman, 1879; Walter J. Cree, 1883; Andrew P. Biddle, 1886; Arthur D. Holmes, 1889; David McClurg, 1892; H. B. Garner, 1892; John N. Bell, 1892; Angus McLean, 1886; Edwin D. Merritt, 1899; Oscar S. Armstrong, 1877; Wm. Appelbo, 1901; C. Hollister Judd, 1897; Emil Amberg, 1894; George E. Clark, 1888; E. P. Mills, 1899; R. F. Foster, 1903; Robert Hislop, 1883; Carlos W. Shotwell, 1903; H. W. Yates, 1894; James E. Davis, 1896; Thos. Jefferson Henry, 1899; John Taylor Watkins, 1906; Frank A. Kelly, 1903; E. G. Martin, 1904; Wm. M. Stapleton, Jr., 1900; S. G. Miner, 1882; Wm. Fowler, 1903; C. G. Jennings, 1879; A. W. Blain, 1906; H. A. Luce, 1905; A. B. Wickham, 1904; R. G. James, 1904; Wm. C. Lawrence, 1904; C. D. Brooks, 1905; J. A. McGarvah, 1905; A. A. Cowan, 1891; J. D. Matthews, 1892; Harold E. Clark, son of the honored guest; H. S. Kedney, 1906; W. Hipp, 1906; L. Mae James, 1903; B. Friedlaender, 1898; Bert Estabrook, 1903; Burt R. Shurly, 1895; Irwin H. Neff, 1889; Robert L. Schorr, 1893; H. Peyton Johnson, 1897; Albert H. Johnson, 1893; T. Malcom Hart, 1897; H. W. Green, 1896; Hugh Harrison, 1896; J. W. Scott, 1896; Wm. A. Hackett, 1894; O. Z. Ide, 1900; A. B. Lawton, 1900; L. F. G. Wendt, 1902; H. W. Hewitt, 1903; Allan W. McDonald, 1901; A. G. Doty, 1900; H. G. Bevington, 1898; W. M. Foster, ——; G. McAlister, 1897; John L. Chester, 1900; Chas. F. Kuhn, 1901; J. B. Hodge, 1906; S. Kahn, 1898; W. M. Donald, 1887; F. J. McCormick, 1905; H. W. Plaggemeyer, President; E. D. Spalding, Secretary; J. M. Robb, President-Elect, Michigan Medical Society; J. D. Bruce, Vice President of the University of Michigan.

MEDICAL ECONOMICS

CAN WE AFFORD STATE MEDICINE?

J. G. R. MANWARING, M.D.
FLINT, MICHIGAN

Part I

CAN THE UNITED STATES SAFELY EXPAND ITS FUNCTIONS FURTHER?

"If ever the people become inattentive to the public affairs, you and I, Congress and Assemblies, Judges and Governors shall all become wolves. It seems to be a law of our general nature, in spite of individual exceptions."—Thos. Jefferson in a letter to Edward Carrington.[1]

One of the most dangerous pastimes in the world is letting someone else spend your money! A sound business principle is one that requires those who have money to control its expenditure.

The obnoxious secret rebates of the railroads, secret division of fees by physicians, horse traders and others, secret commissions of purchasing agents and all sorts of graft by all kinds of officials, public and otherwise, all follow the fundamental fact that the benefited recipients have at their disposal the spending of other people's money. Human nature is too weak to be subjected to the seductive lures resident in spending money not one's own.

In government the squandering of public funds is an immediate outgrowth of the principle that other people's money is recklessly spent.

In a democracy, such as we have largely evolved, we have a system of "rule by organized minorities." There is only one type of influence brought to bear in our legislative bodies and there is only one aim. Organized groups harass and push their representatives constantly for legislation desired by them and with one end only, to do things which cost money. Each group desires something paid for out of funds raised from all of us. They threaten the security of our officials by an organized vote and, as it is other people's money, the officials give in to the pressure with enhanced security to themselves.

Up to this time there has not been a really strong organization formed for the sole purpose of putting the brakes on such expenditures and so having some control of their money which is so spent.

Individuals there are who are protesting, but, alone and unorganized, they are crying in the wilderness.

Under this system there is a constantly increasing stream of money coming from taxpayers flowing through legislative channels, controlled by self-seeking interested parties, both as to the amount of flow and its distribution. There has been no control at the headwaters, no halting of the mounting flood, and, as portions of China with a good rainfall and once green with fertility are now ruined and profitless deserts because of the draw-off of their waters due to the destruction of the headwaters control, so must a system of government like ours eventually be destroyed unless we take heed.

As a matter of history, aside from conquests, governments of the past have fallen most often from oppressive taxation made necessary by the squandering of rulers.

An individual who spends too much and becomes hopelessly involved sloughs off his debts by bankruptcy proceedlings. So governments when hopelessly in debt fall, with the same results that debts are cancelled and a new start is made but at a cost of tremendous suffering.

A few figures will show how we are going down the same old trail:

The tax bill of Michigan and all her subdivisions of Government has increased from—

$40,462,353.56 in 1910 to $340,384,819.43 in 1930.[2]

The people of Michigan paid in federal and state taxes of all kinds over $500,000,000 in 1929.[3]

The total bonded indebtedness of all units of this State is $700,706,053 (1929, not including drain bonds and Covert road bonds not listed in Lansing).

July 1, 1929, to June 20, 1930, the State paid up bonds to the amount of $33,736,826 but added in the same period $80,945,051![4]

In 1929, 1,110,697 village and city lots with assessed valuation of $1,310,025,594.00 were returned delinquent in taxes.

A total of 9,755,470 acres of rural property with a valuation of $226,428,925 was returned delinquent.

Total of State and local taxes returned delinquent for the same year was $36,352,835.83. This is more than the total State tax levy on property for that year, which was $29,500,000.

One-fourth of the acreage of the state was delinquent in taxes and when taxes were paid it was often done by borrowing the money and not getting it from income.[5]

This is enough to show where our state is headed; now for the nation.

The total annual tax budget of the whole nation in 1913 was $2,194,000,000.

In 1930 $10,700,000,000, an increase of 500 per cent.[6]

"From 1913 to 1930 the total expenditures of all government agencies increased from three billion dollars to fourteen billion dollars. The total amount of tax income necessary to defray the cost of government has increased 442 per cent. The really alarming thing about this is not the fact that four and one-half times as much money is being spent, but the fact that expenditures have increased more than twice as fast as the combined earnings and income of the American people."

"To be more specific, here are some startling facts. In the year 1913 the total earnings of every person in the United States from all sources was approximately 34 billion dollars. Out of this income the government took eight and six-tenths per cent, or three billion dollars. But in 1930, out of a total income of every man, woman and child in the country, which will not exceed 70 billion dollars, the government expended 14 billions, or twenty per cent. Thus, in the seventeen years since 1913, the cost of government has increased 442 per cent, while the earning power of the people has increased by less than half that percentage."[8]

To meet this rising cost of extravagance in government, they constantly seek new ways of taxing old things or old ways of taxing new things. In Michigan we have introduced in the past few years state taxation of public utilities, corporation taxes, automobile weight taxes, gas taxes, and now are proposing a state income tax, a sales tax, a cigarette tax, raising the gas tax and even attaching other assets than the property in question for tax delinquency! Each new tax means more to spend, not a lessening of other taxes.

And now a lot of people are calling for the taking over and managing of the practice of medicine and surgery by our government!

What would that do to taxes?

There has been a study recently on the cost of medical care which probably is as exact as the figures can be. It is stated to be about $2,250,000,000 yearly. (one-third of what we spend for tobacco, one-half of what we spend for gum).[7]

That is, the government would have to take over an agency costing $2,250,000,000 to run now, and, with the way things are done, probably costing at lease twice as much under government management.

England has already found the panel system a tremendous and unexpected burden.

We are rushing along a well established course known to historians, and every added tax hastens the end. We have just as good a set-up as Rome ever had in any of its hardest falls. Rome, too, with its Kings and Emperors, had a representative type of government where officials were elected by the citizens, and more or less subject to their control.

In those days the officials spent great sums on armies of conquest, luxurious public buildings, palaces of the most costly type, etc. To retain their offices they spent still more to build up great voting power by unnecessary jobs, retainers, hangers-on, soldiers, entertainers, and subsidies in the way of distribution of grain to the needy, who miraculously grew in numbers when the system worked well. No better scheme of giving a large organized vote the whip hand has been found than by a subsidy system, as England with its dole and its medical service has found out.

One of the best methods of vote getting was by giving the most gorgeous and often the most cruel public spectacles, by which a ruler was judged rather than by his ability or integrity. Good show, big vote.

The result was that the producers from whom the taxes were wrung would reach a point where the burden was too great, and, facing death in preference, they would stage a revolution. The slate would be wiped clean and again the cycle started.

Does not this sound more or less familiar, and are we not on the same course?

There has always been a limit to what could safely be raised by taxation. Can we afford to take up State Medicine when it only means another and dangerous burden?

As loyal citizens, not as physicians, we should fight for a great reduction in government expenditures; which means less welfare work, fewer bureaus, no subsidies, fewer employees, no dole, etc. This is necessary to prevent our government experiencing the certain fate of many predecessors.

There are a number of organizations whose literature is worthy of study and who have as a part of their program the fighting of mounting expenditures in government. Physicians should look into these movements and join hands with some of them for they can do more to prevent the added burden of an unsatisfactory State Medicine than we alone can.

It is suggested that the following organizations be written for literature:

Economy League of Michigan—
1780 Penobscot Bldg., Detroit, Mich.
American Taxpayers League—
Munsey Bldg., Washington, D. C.
Sentinels of the Republic—
National Press Bldg., Washington, D. C.

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608 1ST NAT. BANK BLDG.

THE VALUE OF PERIODIC MEDICAL EXAMINATIONS*

BRUCE C. LOCKWOOD, M.D.
DETROIT, MICHIGAN

Ladies and Gentlemen of the Radio Audience:

To those who have devoted thought to the problems of health and longevity, the subject of periodic medical examinations appears to be the next big step in any program designed to decrease sickness and incapacity, increase efficiency and happiness, and further lengthen the span human life.

In the relatively recent past, the average age at death in this country has been increased to fifty-eight years. But this good showing has been brought about, first, through the enormous decrease of infant mortality, and, second, through the control of many of the acute infectious diseases, such as typhoid, smallpox, and diphtheria. Yet the incidence of early adult apoplexy, heart disease, kidney disease and digestive tract disorders goes on unabated. It is this latter group of diseases which periodic medical examinations could discover in their early stages, when the best results are obtained by treatment.

Infant disease and mortality has been decreased through the intensive study and use of preventive measures. Baby clinics have been well supported. Through propaganda and instruction, mothers have been taught to care for their babies in the right way, to protect them from infections, to feed them correctly, and methods have been found to provide them only with a pure, clean milk. The mothers have become "baby minded." But what of the mother herself?

Economically, one adult is worth many children, for the adult is the bread-winner and worker for

*A radio address delivered by Dr. Lockwood under the auspices of the Wayne County Medical Society.

the whole family. We have done much for the child but what have we done for the adult?

In the realm of infectious diseases, great improvement has been noted in the control of typhoid, tuberculosis, small pox, diphtheria, syphilis, malaria, yellow fever, hook worm, dysentery and many other infections.

The death rate from typhoid fever has dropped from 36 to 7 persons per 100,000 in the past 20 years, due to the application of our knowledge that the disease is chiefly transmitted through unclean water, milk and food, and to the use of preventative typhoid vaccine. During the Spanish American War, typhoid killed many more soldiers than did Spanish bullets, but during the World War typhoid was practically absent, due to the sanitary regulations and required vaccine injections carried out by the army medical corps. During two years with the army in France I did not see a case of typhoid.

In tuberculosis we have seen a decrease in the death rate during the past 20 years from 201 to 97 persons per 100,000. This is due to the earlier recognition, earlier treatment and more careful measures to prevent the infected person from spreading the disease to others. Early recognition is the all-important thing for the benefit of both the infected person and his associates.

Small pox vaccination is well-nigh universal and has practically stamped out the disease. Diphtheria has lost its horror due to the preventive use of toxin-antitoxin and the curative use of diphtheria antitoxin, which if used early neutralizes the poison before the patient has been badly damaged or killed.

Today, the greatest cause of poor health, incapacity, and death are those chronic diseases which the doctor sees daily in his office. I refer to such conditions as heart disease, kidney disease, too high or too low blood pressure, anemia, obesity, diabetes, tumors, various digestive disorders, goiter, tuberculosis, foci of infection in various parts of the body and so on. These are a few of the conditions which an individual may have and in their early stages be symptom free, yet conditions which may be diagnosed and which respond, as a rule, very well to early treatment. The earlier the diagnosis the better the prognosis.

These conditions cripple, impair, and deprive the individuals of their earning capacity. They may take years to develop their damage, often beginning before thirty and becoming more manifest in the forties and fifties when we find these persons with crippled hearts, damaged kidneys—damaged often beyond repair, limited in their capacity for work and in their opportunity for happiness. And most of these damages were at one time repairable and curable. The economic loss is staggering.

The report of the committee on Elimination of Waste in Industry, of which President Hoover is chairman, shows that five hundred thousand working people die every year, and that of these deaths at least half could be prevented by similar measures to those that have stamped out typhoid, small pox, malaria and yellow fever. The economic loss in this country alone from preventable diseases exceeds three billions every year, which incidentally is about five times the annual doctors' bills.

During the World War the searching draft examinations of the young men of this country disclosed an appalling percentage of physical incapacity, not illness, but physical impairment, in a class wherein one might expect the best findings.

Healthy minds are usually found in healthy bodies, and history has shown that the continued life and efficiency of a nation has invariably been in proportion to the health of the people as a whole.

I could quote statistics indefinitely showing the results of actual investigations made by life insurance companies, health clinics, and big corporations, showing the value of periodic medical examinations, early recognition of incipient disease and early medical treatment.

The life insurance companies were the first of the big business corporations to investigate on a large scale, the results to be obtained by such periodic and frequent examinations. Theirs was a cold calculating interest involving income and out go. One big company made such examinations on 6,000 persons, all presumably in good health. Recommendations were made for repair of apparent defects and advice given for the prevention of other defects due to bad habits or conditions of living. These people were carefully followed up for five years, and then their illness, incapacity, and death rate compared with 6,000 persons of similar ages and conditions who apparently were in as good health in the beginning but who had had no examination and received no attention other than they might seek for themselves. In these groups there were to be expected under standard mortality tables, 303 deaths, but in the examined and advised group there were actually only 217 deaths, a saving of 86 lives.

More and more of the larger business organizations are going into periodic medical examinations on a large scale, and more and more better-informed people are doing the same thing for themselves individually. The reason is that it pays bigs dividends in extension of life and usefulness, lessening of suffering and illness, and lessened financial losses to the individual.

Everybody recognises that a machine properly handled and inspected will last much longer and give better service than one that is neglected. The body is a machine, the most complicated and neatly adjusted one in existence. Yet it is biological, its parts are not subject to immediate replacement, but can only be repaired or protected by slower processes.

One might ask why supposedly sane persons neglect themselves? The answer may be one of several things. Neglect and blind optimism is probably the chief cause. It is but human for one to feel that he is immune to the trouble which besets others. Another factor is lack of knowledge, the ignorance of many people regarding the workings of their "insides" is appalling. I believe that it would be a benefit to everybody if more complete and compulsory courses in anatomy, physiology and hygiene of the human body were to replace other less vital courses throughout our public schools. There are a few people who do not believe that it is as safe to place their confidence in a doctor with years of training and experience, as it is to follow, or to try some particular cult or fad. Some people practice a mistaken false economy, the definitely poor, which we have always had with us, but much more so in depressed times, can and always have obtained free medical service from the doctors.

The ethical practice of medicine of today is not a cult, a religion or a fad. It is the gradual development of a science and aims to use all that has been discovered which will aid in the prevention, diagnosis and treatment of disease. It has kept abreast of other sciences in new discoveries, methods, developments and results. The physical, laboratory and X-ray machinery of diagnosis has been developed to a point undreamed of a few years ago. But it must be understood that, as yet, the earliest detection of most of these chronic diseases offers greatest hope of staying their progress.

Consult an ethical well-trained physician at least once a year. Have a thorough examination, including those laboratory and X-ray examinations necessary for the best understanding of conditions present. Follow his advice carefully.

To those who might say that the doctors advise periodic examinations for selfish purposes, I can an-

swer that, aside from the medical and dental profession, I know of no other profession or business whose research, endeavor and teaching are aimed at the diminution and possible eradication of that from which they now receive their own livelihood.

Medical science offers more today than ever before for the prevention and cure of disease, the relief of suffering and physical incapacity and the prolongation of life. But it is of value only when and if used. The cost in time and money is less than that spent on less important things. The average annual cost of the doctor for a middle class family is 24 dollars, while the average cost for upkeep for their low priced auto is 187 dollars. For every dollar paid the doctor in this country there are paid about 3 dollars for tobacco, 2 dollars each for candy, movies and soft drinks and about 1 dollar each for jewelry, furs, radios and perfumes.

As you can see, the comparative cost of medical service is low. One of the investigations made by the National Committee on the Costs of Illness, of Washington, D. C., covered the net incomes of doctors and dentists of Philadelphia and Detroit. It showed that their average net income was much less than that of business men, not engaged in purely personal service, but that it compared more with the salaries received by less trained men, not carrying the risk of a fixed overhead. For every dollar they collected about 45 cents went out for necessary professional expenses.

Low as is the average cost of medical care, it could be made much lower if each individual would become more health-minded, give their own body better handling, have periodic frequent medical examinations, follow the advice given, and thereby prevent many of the soctly, lingering illnesses of middle age.

There are health giving qualities in good humor. Cultivate a cheerful, optimistic disposition, but do not disregard disagreeable sensations or pain, have an investigation made by an honest well trained ethical physician right away. If it is without importance he will tell you so.

For information on medical service, call on your family doctor. If you have no physician, call the county medical society.

Life is short and time is fleeting, and every thing that can be done to make our stay on this earth a happy, useful, long and successful one is worth while.

Success depends on health, without health nothing else counts very much. See your doctor at least once a year for a thorough examination, and give this house in which you live the same scientific attention that you demand for other less valuable possessions. Can you afford not to do so?

COMMUNICATIONS

TEXAS INTERESTED

Fort Worth, Texas, Jan. 20, 1932.

Dr. F. C. Warnshuis, Secretary
Grand Rapids, Mich.

Dear Doctor Warnshuis:

Dr. Anderson and I have been very much interested in the charts representing the activities of the Michigan Society, published in your January Journal, and I am writing to ask that you see that somebody informs me as to the use you have made of these charts, or expect to make of them, in addition to their publication in your journal.

Likewise, please advise whether there would be any objection if we copied them or paraphrased them, in striving for such doubtless very well thought out and promising purposes.

In making this request, I am not unmindful that I owe you a fifteen-hundred-word article on political problems, and as soon as I get in the clear, where I can give the matter a little thought, you will get it if you still want it. The file is still on my desk, where it will remain until I am in a position to dispose of it.

Incidentally, I think I am improving in health, and I am coming to the conclusion, which I hope will be a correct one.

Thanking you in advance for the service I am asking of you, and with personal regards,

Fraternally yours,

HOLMAN TAYLOR,
Secretary-Editor.

WE MUST PATRONIZE THIS AND OTHER ADVERTISERS

At the suggestion of the Manager of the Coöperative Medical Advertising Bureau, we are writing you relative to Cocomalt and the advertising of Cocomalt in the state medical journals.

Frankly we need your support—as well as the support of every other reputable doctor. We are manufacturing an outstanding food product—Cocomalt—and are endeavoring to advertise it in an honest, reliable way.

To date Cocomalt has made encouraging progress. And we wish to have this progress continue. Sales could be greatly accelerated through the medium of sensational advertising. We prefer, however, to keep our advertising conservative and it is for this reason that we need your assistance.

When recommended by doctors, Cocomalt, in a number of instances, has acquitted itself in a creditable way. Therefore if a larger number of doctors recommend Cocomalt in cases where the recommendation is justified, it will be of three-fold advantage—to the patient, to the doctor and to ourselves.

We are enclosing a copy of the book "Facts about a Vital Food" which describes Cocomalt in detail. We are also enclosing copies of two voluntary unsolicited letters sent to us by grateful users of Cocomalt. An exceptionally large number of similar letters are received every year.

We are of the opinion that you are favorably influenced towards Cocomalt and that you would not hesitate to pass along to doctors, nurses and consumers, with whom you come in contact, the different points concerning Cocomalt that are deserving of your recommendation. Your coöperation will be of definite help to us and will cause us to feel we have been rewarded for keeping our advertising on a conservative basis.

It is a pleasure to take this opportunity to assure you of our sincere best wishes.

Very truly yours,

R. B. DAVIS COMPANY,
S. E. Van Wie,
Advertising Manager.

FOUR TYPES OF ENCEPHALITIS

Milo K. Miller, South Bend, Ind., reports four types of encephalitis recently encountered in his practice. They consist of one case each of mumps meningo-encephalitis, postvaccinal encephalitis, measles encephalitis, and hemorrhagic encephalitis following arsenical therapy (sulpharsphenamine).—*Journal A. M. A.*

SOCIETY ACTIVITY

POST-GRADUATE COURSES
THE MICHIGAN STATE MEDICAL SOCIETY
and
THE UNIVERSITY MEDICAL SCHOOL
Announce
The Fourth Annual Program
of
Courses for Graduates

PRACTITIONERS' COURSE IN MEDICINE, SURGERY, OBSTETRICS AND PEDIATRICS. June 6 to 18, inclusive. This Course consists of 72 hours instruction, 8:00 A. M. to 4:00 P. M., in Children's, Ford, Grace, Harper, Herman Kiefer, Providence and Receiving Hospitals, Detroit.

PROCTOLOGY. June 6 to 18, inclusive, 8:00 A. M. to 12:00 M. 48 hours. Receiving Hospital, Detroit.

GYNECOLOGICAL PATHOLOGY. June 6 to 18, inclusive, 8:00 A. M. to 12:00 M. 48 hours. Pathological Laboratories, Detroit College of Medicine and Surgery, Detroit.

Practitioners taking this or the preceding course may arrange to spend the afternoons in the Library, Pathological Laboratories, or in the General Practitioners' Course.

TUBERCULOSIS. April 11 to 15, inclusive. 35 hours. A five-day intensive course emphasizing the early diagnosis of tuberculosis, X-ray, clinical methods, and the medical and surgical approaches in treatment. University Hospital, Ann Arbor.

OPHTHALMOLOGY AND OTOLARYNGOLOGY. April 25 to 30, inclusive. An advanced intensive course arranged for physicians especially interested in these fields. Either or both subjects may be elected. University Hospital, Ann Arbor.

Enrollment in all courses is limited.

Courses in Special Fields available throughout the year. INTERNAL MEDICINE, PEDIATRICS, GYNECOLOGY AND OBSTETRICS, ROENTGENOLOGY, LABORATORY METHODS AND SEROLOGY.

Address: Department of Post-Graduate Medicine, University Hospital, Ann Arbor, Michigan.

COUNTY SOCIETY ACTION

This year must evidence an intensification of activity on the part of county societies. This need of action applies to every county —whether composed of ten members or of 1,000 members, the responsibility of instituting recommended undertakings rest with the County society. If our state plans and movements are to be successful and the ends sought are to be attained every County society must record action.

The House of Delegates has assigned the following tasks and duties.

1. The creation of a Public Relations Committee that shall solve and adjust local economic problems.
2. The appointment of a local medico-legal advisor who shall coöperate with the medico-legal committee.
3. Devising a county plan for the care of indigents.
4. Securing as members every eligible physician in your county.
5. Appointment of a legislative committee that will maintain intimate contact with your legislative representatives.
6. Organization of a Woman's Auxiliary.
7. Conducting Public Health Educational meetings.
8. Apply the recommendation of our State committees on Civic and Industrial Relations, Cancer, and Survey of Medical Agencies.

If every County Society undertakes to institute these activities, 1932 will be a year of commendable organizational achievements. Presidents and secretaries are urged to present these duties to their society and guide their institution.

The following state Society Activities expense pro-rates per member as follows:

Journal	$ 4.12 per member
Legislation	.84 per member
Committees	.55 per member
History	.49 per member
Council	.60 per member
Society expense	1.26 per member
Medico-legal	2.51 per member
Post Graduate	.71 per member
Annual Meeting	.51 per member
A. M. A. Delegates	.13 per member
Salaries, Stenographers, Rent, Power, Light, Telephone, Postage, Printing	3.61 per member
Total	$15.33 per member

You personally receive $15.33 of activities for your annual dues of $10.00—50 per cent dividend upon your dues. These activities produce personal benefits for you. The $5.33 of expenses that are incurred over and above your dues are defrayed by advertising, interest on investments and contributions. Were these earnings not possible your annual dues would have to be at least $16.00 per year. Members receive more value than what their dues defray.

SURVEY OF MEDICAL AGENCIES

Pursuant to the call the House of Delegates met in special session on January 27, 1932. Sixty-seven out of a possible 80 delegates attended and constituted a splendid representation of the entire membership. After organization, the House went into executive session.

Dr. W. H. Marshall, Chairman of the special committee on the Survey of Medical Agencies, presented a forty-five page report. The report reflected a most excellent preliminary investigation made by the committee. It was received with commendation.

Terminating the executive session the following action was recorded:

1. That the report be adopted.
2. That the committee be continued.
3. That the outlined survey be instituted.
4. That the committee be instructed to report its progress at the September annual meeting.
5. That the Council be requested to appropriate funds to defray the committee's expenses.

The committee, in its report, made the following recommendations which were approved:

1. That any physician becomes ineligible for membership or continuance of his membership if he associates himself with any group, clinic or hospital that provides medical care to individuals who are financially able to assume reasonable charges for his medical care and where such groups, clinics or hospitals do not permit its medical staff to determine the individuals eligibility for free service.

2. That this House of Delegates transmit to the University Regents and to the Administration Committee of the University Medical School and Hospital its disapproval of any attempt or activity that has for its purpose the taking over, by medical

faculty or staff members, the administration of any clinic or hospital in the state. That we protest the use of the University Hospital for the care of patients beyond the number required for teaching purposes.

3. That each county society appoint a Public Relations Committee for the study, solution and adjustment of local problems.

4. That legal proceedings be instituted against corporations now practicing corporate medicine in an endeavor to terminate corporate practice.

The special committee will now perfect a survey organization and press forward its work in obtaining truth finding facts upon which to base indicated recommendations and policies.

MINUTES OF THE JANUARY MEETING OF THE EXECUTIVE COMMITTEE OF THE COUNCIL

The Executive Committee of the Council met in Jackson on January 26, 1932, with the Chairman Dr. Corbus, presiding and the following members present:

George L. Le Fevre
Henry Cook
Henry R. Carstens
James D. Bruce
Carl F. Moll, President
J. M. Robb, President-elect
F. C. Warnshuis, Secretary

1. The Secretary reported that the Kalamazoo Academy and the Kalamazoo Convention Bureau recommended the dates of September 13, 14 and 15, 1932, as most suitable for the holding of our Annual Meeting. After discussion. upon motion of Cook-Le Fevre, the Executive Committee approved and designated these dates for our 1932 Annual Session.

2. The Secretary reported in a general way the tentative plans that had been adopted by the Scientific committee for the 1932 scientific program.

Upon motion of Le Fevre-Cook, the Secretary was instructed to advise the section officers that when conducting the meetings of their sections they must not and shall not change the order of the scientific programs and that the announced speakers shall appear at the time and in the order in which they were announced.

3. The Secretary reported that he had received bond in the amount of $25,000 covering the Treasurer, Dr. A. V. Wenger; he further reported that the transfer of the securities held by Dr. Rogers to Dr. Wenger had been consummated and that he held in the files of the Society a receipt from Dr. Wenger for these securities and bonds.

4. The Secretary requested instructions in regard to the sending of the Journal, and the according of medical defense to the delinquent members of the society to whom the Council had been sending the Journal and according protection during 1931. After considerable discussion the following motions were made by Le Fevre-Bruce:

1. That because of the rapidly increasing expenses occasioned by the increasing number of threatened suits and suits the Society is unable to accord medical protection to delinquent members, and that the Secretary be instructed to advise by letter each delinquent member that after February 15, 1932, medico-legal protection would be discontinued to all those who are in arrears in their dues.
2. The Secretary was directed to continue sending the Journal to delinquent members not as a precedent but solely to evidence the willingness on the part of the Council to accord all those privileges of organized medicine to members, who by reason of the financial depression, find it embarrassing to continue their medical affiliation with their county and state society.

The Executive Committee adjourned at 9:45 p. m.

F. C. WARNSHUIS,
Secretary.

MINUTES OF THE MEETING OF THE SCIENTIFIC COMMITTEE

The Scientific Committee met in Jackson at 6:00 P. M. on January 26, 1932.

The chairman and secretaries of the six scientific sections were in attendance.

1. The Secretary announced that the House of Delegates at the Pontiac meeting referred to the scientific committees the question of a change in the schedule of the scientific sessions and requested the committees to consider the holding of one or two combined sessions for the presentation of scientific papers and discussions.

The committees devoted considerable time in a full and free discussion of plans and subjects for the scientific meetings.

2. Upon motion of Miller-McKean, the scientific committee resolved that for the 1932 annual meeting two mornings would be devoted to sectional meetings and two afternoons would be devoted to combined scientific sessions in which all the sections would participate.

3. The committee then entered into a long discussion of speakers and subjects for the general sessions and after mature deliberation formulated the following program:

That on the first afternoon the following subjects would be presented:

Allergy
Acute Perforating Ulcers of the Stomach
Pneumonia
Neoplasms of the Breast
Injection Treatment of Varicose Veins

The program for the second afternoon to be composed of presentation of papers on the following subjects:

Posture
Otitismedia
Some phases of Heart Disease
Nutrition
Contraceptive Measures

4. The committee then discussed as to whom would be desirable speakers to cover these subjects and several nominations were made. It was duly moved that the secretaries of the sections on Medicine, Surgery, Gynecology and Pediatrics would write to these nominees to secure their acceptance of an invitation to so participate in our program.

5. Upon motion duly made, the section officers will assume the responsibility of selecting the subjects and speakers for the morning meetings of their sections.

6. Upon motion duly made, the preliminary program for the general session and the sectional sessions shall be in the State Secretary's hands not later than July 10, and the final completed program shall be in the State Secretary's hands not later than August 10.

The committee adjourned at 8:45 p. m.

F. C. WARNSHUIS,
Secretary.

PROCEEDINGS
SPECIAL MEETING OF THE HOUSE OF DELEGATES
MICHIGAN STATE MEDICAL SOCIETY

January 27, 1932
Hotel Hayes
Jackson, Michigan

A Special Meeting of the House of Delegates of the Michigan State Medical Society was called to order, pursuant to call, at the Hayes Hotel, Jackson, Michigan, at ten o'clock on the morning of January 27, 1932, with the Speaker, Henry J. Pyle, presiding.

The Speaker: Will you come to order?

We will listen to the report of the Credentials Committee. Dr. Hasley.

Dr. C. K. Hasley (Washtenaw): The Credentials Committee wishes to report that there are fifty-five duly qualified delegates enrolled. I move that the registration slips Dr. Warnshuis has constitute the roll call.

The motion was regularly seconded, was put to a vote and carried, and the roll call was as follows:

H. J. Pyle, Kent; F. C. Warnshuis, Kent; C. T. Ekelund, Oakland; J. G. Crownhart, Madison, Wis.; F. W. Garber, Muskegon; A. L. Callery, St. Clair; C. K. Hasley, Washtenaw; F. J. Kilroy, Wayne; T. E. Schmidt, Jackson; G. J. Curry, Genesee; F. E. Reeder, Genesee; H. G. Huntington, Livingston; G. C. Penberthy, Wayne; C. R. Keyport, Crawford; Bert U. Estabrook, Wayne; W. H. Marshall, Genesee; F. A. Baker; L. G. Christian, Ingham; W. A. Manthei, Houghton; V. H. Vandeventer, Marquette-Alger; A. G. Sheets, Eaton; W. L. Godfrey, Calhoun; L. J. Gariepy, Wayne; E. D. Spalding, Wayne; A. E. Catherwood, Wayne; L. J. Hirschman, Wayne; H. W. Plaggemeyer, Wayne; P. D. Amadon, Monroe; H. B. Zemmer, Lapeer; W. Ellwood Tew, Gogebic; J. D. Curtis, Wayne; J. A. Wessinger, Washtenaw; J. D. Brook, Kent; A. C. Biddle, Wayne; G. H. Southwick, Kent; A. V. Wenger, Kent; B. M. Mitchell, Oakland; J. E. Davis, Wayne; B. L. Connelly, Wayne; L. T. Henderson, Wayne; E. C. Baumgarten, Wayne; L. O. Geib, Wayne; J. L. Chester, Wayne; O. G. Johnson, Tuscola; W. C. Ellet, Berrien; E. L. Foley, Alpena; H. A. Luce, Wayne; A. H. Whittaker, Wayne; R. A. Springer, St. Joseph; F. T. Andrews, Kalamazoo; W. C. McCutcheon, Cass; Dean C. Burns; H. E. Perry, Luce; L. W. Switzer, Mason; T. P. Treynor, Mecosta; J. H. Andries, Wayne; I. W. Greene, Shiawassee; J. T. Connell, Genesee; W. S. Reveno, Wayne.

The Speaker: We will listen to the reading of the call of this Special Meeting.

The Secretary read the call to the meeting.

The Secretary: Mr. Speaker, may I ask the indulgence of the House for a moment to present to the House Dr. R. G. Leland, Director of the Bureau of Medical Economics of the American Medical Association? Dr. Leland. (Applause.)

May I also present to you the Executive Secretary of the Wisconsin State Medical Society, Mr. George J. Crownhart of Madison, Wisconsin? (Applause.)

The Speaker: If there is no objection on the part of the assembly, these gentlemen will be given the privilege of the floor during this meeting.

The Chair believes this session will have to do largely with medical economics, and as a result the Chair would entertain a motion that we go into executive session.

Dr. J. D. Brook (Kent): I move that we proceed in executive session.

The motion was supported by several, was put to a vote and carried.

The Speaker: As we go into executive session, I would like to appoint as Sergeants-at-Arms, Dr. Ekelund of Pontiac and Dr. Wenger of Kent. They will poll the House so that only those who are members will remain.

Pursuant to the polling of the House by the Sergeants-at-Arms, the House resolved itself in executive session.

The Speaker: The House is now in executive session.

We will now listen to Dr. Burton R. Corbus, Chairman of the Council.

Dr. Burton R. Corbus (Kent): Mr. Speaker, and members of the House of Delegates: The Council desires me to anounce that in response to a feeling on the part of a considerable number of men, particularly those men in the industrial centers, that some lessening of the expense of the State Society might obtain in this period of depression; that they have carefully gone over the matter, giving great consideration to what might be done and still the work of the Society be carried on in a satisfactory manner, and the Council has decided that in addition to the arrangement which was earlier made for the men to give notes for their dues that for this year a rebate of $2.50 on the dues shall be made. The question had come up as to the possibility of making a reduction in the dues. That was impossible under our By-laws, but this plan has the precedent of a rebate in dues which we made to those men who went to the War.

To do this, and to have our very large number of activities continue, it will probably be necessary to draw on our reserves, but we hope to keep it down by lessening some of our activities and by a great effort at economy to make the loss as little as possible.

We have very carefully scanned every department, making reductions in our budgets as close as we can. Specifically, the Secretary has agreed to accept a reduction in his salary of $2,500 a year, and the Editor of $1,000. We are lessening our space in the offices and in many other ways are trying to cut down in this period of necessary economy just as much as we can.

Certain expenses we anticipate will increase, notably that of the legal defense fund. This year it cost us $10,000 for legal defense, which is way over what is being paid in. May I call your attention at this time to some charts that are here for your inspection, showing, first, our increase in activities since 1913 to 1931 and 1932, and calling your attention also to what the State has given its members in benefits. You will notice that $14.33 were expended this year and the difference between that and the dues was made up by advertising, interest on our investments, and a certain amount of money we obtained from the Couzens Fund. The largest part of those expenses was expressed by the amount it cost us to run the Journal and run the Medico-legal Committee. We hope, in spite of this rebate, to carry on so you will obtain almost as much as you have ever obtained from the work of the State Society.

Mr. Speaker and the House of Delegates, may I wish, for myself and the Council, great success in this very important subject which is up today. Organized medicine must take a lead in this evolutionary medical problem which is now under way and is so very disturbing. The state of Michigan has ever taken a prominent place in forward looking movements, and we are being watched today as to our deliberations. I have great confidence and great hope that a great deal is to come out of this meeting.

The Speaker: We will now receive the report of the Special Committee, which has been appointed by the President on the Survey of Medical Agencies, Dr. Marshall being Chairman, and the other members of the Committee being Dr. Estabrook, Dr. Baker, Dr. Christian, and Dr. Gorsline.

Dr. W. H. Marshall presented the report of the Special Committee on the Survey of Medical Agencies.

The Speaker: Gentlemen, you have heard this report.

Dr. W. C. Ellet (Berrien): I move that this excellent report be adopted by this House of Delegates.

The motion was regularly supported, was put to a vote and carried.

The Speaker: The report is adopted.

H. A. Luce (Wayne): I move that the sincere and heartfelt thanks of this House of Delegates assembled in special session be expressed to this Committee for their untiring labors and hard work.

The motion was supported by several.

The Speaker: Gentlemen, that motion is carried if there is no objection on it.

J. D. Curtis (Wayne): I would like to ask the privilege of the floor for about three or four minutes for Dr. Sandweiss of Detroit, who has some interesting data that should be included in Dr. Christian's report. Dr. Christian said he had no details from Wayne, and if the House is willing I would like to suggest that this report might be augmented by what Dr. Sandweiss has to say.

The Speaker: If there is no objection on the part of the assembly, I will give the gentleman the privilege of the floor.

Dr. David J. Sandweiss read his prepared paper.

Dr. Sandweiss: If there are any questions or any figures I can give you, I should be glad to answer them.

The Speaker: Is there any further business to come before this meeting?

Dr. J. D. Curtis (Wayne): It wasn't clear to me, at least, whether or not this work which Dr. Sandweiss has reported is part of the work of the Committee.

Dr. W. H. Marshall: No, it was not reported.

Dr. A. H. Whittaker (Wayne): I should like to take this opportunity, Mr. Speaker, of thanking this Special Committee for the very wonderful report which they have made today.

I think one of the things that points out the importance of this survey is the fact that this plan is gaining recognition in other states, and if I may take just a moment I would like to mention what the Wisconsin Medical Society is planning on doing. This is taken from their President's Page of a recent number of their Journal. It is entitled, "Distribution of Medical Service."

"Pursuant to a resolution passed in the last House of Delegates, the President has appointed Dr. Gilbert Seaman, Chairman, Dr. D. E. W. Wendstrand, and Dr. Gunnar Gundersen, a committee of three to pursue the study of the distribution of medical service in Wisconsin. In its broadest aspects, the purpose of such an undertaking is an attempt to formulate a plan which in its operation shall solve what Dr. Olin West, Secretary of the American Medical Association, has designated as the greatest problem in American medicine, namely, to make available to all the people, everywhere, all that is best in medical service at a price commensurate with the ability of the patient to pay.

"In an attempt to collect and systematize the data from which the desired conclusions may be drawn, the committee will probably find itself essentially a fact finding body. It will require a study of the whole subject of the distribution and cost of medical service from several points of view —that of the physician, that of the layman, of such agencies as have been employed in this state to render to the people a service which they do not or cannot pay for, and possibly a fourth in a study of what other states have attempted in this matter.

"What are some of the facts which this committee will ascertain? First, the distribution of physicians in the metropolitan, in the urban, and in rural areas. Where are the 2,800 physicians of the state located? Are there any people so situated that the services of the physician are not readily available to them? Are facilities in the way of hospitals, laboratories and libraries within easy reach of those in need of them? Are medical fees too high? Are they too low? What should be the income of a physician, taking into consideration his investment in time, money, and equipment, his hours of labor and the responsibilities which he assumes as compared with men in other professions or in business?

"Is the public availing itself of such medical service as the profession is ready and anxious to afford? If not, is it because the service is not available, because of lack of appreciation of the service, or because of the cost of the service? What proportion of the population of the state of Wisconsin receives an income at or below the sum determined upon as the minimum required to maintain an American standard of living? What is the average cost of medical service to a family of five in this state? Can such cost be met out of an income below the minimum living wage? Is it possible to distribute the cost of medical service so as to lighten the burden and enable the public to avail itself of the service and at the same time assure the physicians of a fair income?

"The third topic of study is the gratuitous medical service afforded by official, semi-official, and lay organizations in Wisconsin. What kinds of service do they afford, to how large a number of people and what class of people? What is the total cost of such service? Is some of the work carried on by such organizations, service that should be legitimately in the hands of private practitioners? Are the state, municipalities, and counties, through various organizations and institutions, invading the field of private practice, and is such invasion a response to a demand on the part of the public for a service which the individual cannot afford for himself? To what extent and along what lines is industry entering the field of medicine? Are public clinics, dispensaries, private clinics, groups, contract practice, a means employed to solve the problem of the distribution of cost of medical service, and if so to what degree do they accomplish their end?

"The Budget Committee of the Council of the State Medican Society, realizing that this survey will require a great deal of time and much more work than the members of the committee can personally perform, has included in the suggested budget for the coming year the sum of $1,800 to be used by the committee as it may deem advisable in the pursuit of its work.

"It is to be hoped that every doctor in the state will cooperate with this committee to the fullest extent and that every physician will promptly and to the best of his ability respond to every request made of him by the committee for data and statistics that will promote the study. It is only as we all do our several parts that we can hope to obtain reliable and sufficiently complete data to enable us to draw helpful conclusions."

I hope our Society will be able to coöperate in the fine work which has been going on in the way the state of Wisconsin has been rendering coöperation.

To further point out the recognition which this work is receiving, I should like to quote from the January issue of the Illinois Medical Journal. The article is entitled, "A Valuable Survey of Medical Charities by the Michigan State Medical Society."

"We are much interested in a special meeting of the House of Delegates of the Michigan State Medical Society that will convene in January, 1932. At the last annual meeting of their House of Delegates there was appointed a committee on investigation and survey of medical service in Michigan. This committee has had several meetings and are now laying the ground for a most careful and scrutinizing survey of all agencies that are now endeavoring to render some type of health service in the form of clinics, foundations, hospitals and lay activities. The committee contemplates exposing the overlapping of many of these agencies, the disregard to the individual's right to such free service and the other evils that are increasing with all these types of service.

"The committee proposes to make a most intensive survey of the entire state. The work is expected to take about a year and will entail the expenditure of something like $25,000 or $30,000. Part of the money has been already raised. There will be no trouble to secure the balance. It is the belief of the Michigan State Society officials that their findings will be of service and value to other states and that possibly they will be able to start a reform that will spread throughout the nation.

"Of course, the committee is running into opposition with those within the ranks as well as those who are in political offices or who pose as public benefactors. This was to be expected at the outset but we are confident the committee will not be swerved from the objective they set out to reach."

In following out the line of reasoning that this work of ours has some national recognition, I would like to present a resolution. Inasmuch as the A. M. A. will meet in April and this is the only opportunity I will have, I should like to ask your consent to introduce the following resolution:

Dr. A. H. Whittaker presented his prepared resolution, which was turned over to the Secretary.

Dr. Whittaker: I move that this resolution be adopted by this House of Delegates.

Dr. H. A. Luce (Wayne): I support it.

Dr. L. J. Hirschman (Wayne): May I ask the Speaker at this time if he will extend the privilege of the floor to Dr. Leland of the American Medical Association, who can tell us, through the Public Health, whether any such survey is in progress now.

Dr. R. G. Leland (Director of the Bureau of Medical Economics of the American Medical Association): I happen to know, Mr. Chairman and members of the House, something about this, but I am not privileged to say just what I do know about it.

However, while I am on my feet, may I say that both Michigan and Wisconsin should be very proud to be the leaders in making a survey of this type. This is the thing which is necessary throughout the country. If the medical profession is to meet the criticisms that have been leveled at it through the popular press, it should be done in such a careful way that no attempt at conclusions is made until every possible contributory bit of evidence and data is at hand. It seems to me, furthermore, that until you include such a comprehensive study in your profession, as you plan on the agencies outlined in this very ambitious work which your Committee has undertaken, your study will not be complete.

Not long ago I had the privilege of talking with some of the men in Wisconsin, and their plan is to do that part first. It is merely a matter of choice. Therefore, there are many things which I believe are of exceedingly great importance. You know about your own profession, whether the number of physicians in a community is too great or too small; whether their income is handicapped by these things which the community has already pointed out and which along this line they are going to continue to work. There are many things outside of these specific and local problems which we are undertaking, and as soon as that data is available from our headquarters just as soon as possible it will be made available to all state societies.

We hope you will feel perfectly free to call on the Bureau of Medical Economics of the American Medical Association for any help which we may be able to give you.

The Speaker: Is there any further discussion on Dr. Whittaker's motion?

Member: I want to know whether this study has been started, and what it has started. If so, the resolution is superfluous. If they have already started that study, is would be rather silly to start this.

The Secretary: It hasn't been started.

Dr. W. H. Marshall: I did prepare a paragraph on this thing and then destroyed it. As you probably know, the American Manufacturers Association went on record against national insurance and in December, I think it was, in Chicago the meeting of the American Federation of Labor also went on record as being opposed to it. I felt that inasmuch as the Manufacturers Association was opposed to it, and the American Federation of Labor was opposed to it, it wasn't an immediate problem and therefore I destroyed the paragraph, which was rather an extensive one.

The Speaker: Is there any further discussion, gentlemen? All in favor of adopting this resolution and the motion of Dr. Whittaker say "Aye"; contrary, "No." The motion is carried.

Gentlemen, at this point I would like to give the privilege of the floor to Mr. Crownhart from the state of personal liberties, Wisconsin. We received some flowers in print from Illinois. Let's have them in print from Wisconsin.

Mr. J. G. Crownhart (Madison, Wis.):

I think in the nine years I have been associated with the work in Wisconsin, I can best express what we are trying to do by a rather mixed metaphor I heard the other night. I was in a meeting of the Calumet Society in northern Wisconsin. They had present one of the local politicians who expressed the thought in the course of a general conversation, that government had gone a bit too far, and he said that in his effort in governmental work, as he represented the people of that county, he was going to rest on his oars and keep his ear to the ground. (Laughter)

I think possibly the tendency in Wisconsin, and possibly in some other states, is that we have all been keeping our ears to the ground and resting on our oars.

I recognize the work you are doing, and particularly the work we are doing, is far more in advance of the effort to keep the oars going while we are working. Thank you. (Applause)

The Speaker: Now your Speaker would like to have the privilege of the floor in asking for information. A thing that has pained me in the past, which has happened to many of you as individuals, are the garbled reports of the press. The Speaker is going to ask what is going to be given to the press. Is someone going to step on him or coerce him into saying the right thing? I wonder through what channel this is going to the press? How is this going to be reported? Is it going to be fair? Is it going to be garbled? So often it is garbled.

Dr. L. G. Christian (Ingham): Inasmuch as Dr. Marshall is Chairman of this Committee, and is more familiar than any of the rest of us, I would like to move that Dr. Marshall be the official spokesman to the press in giving out any information.

Dr. L. J. Gariepy (Wayne): I have no idea that Dr. Marshall will handle the burden himself. I would like to make a motion that a committee of three be appointed to handle the publicity of this meeting.

Dr. L. J. Hirschman (Wayne): I believe we have adopted the Committee's report. The Committee specifically recommend in their report that all publicity emanate only from the Committee, and inasmuch as the Chairman of the Committee is the mouthpiece of the Committee, this is all out of order.

The Speaker: Dr. Christian's motion is before the House, which is strictly in line with what you have said.

Dr. W. H. Marshall (Genessee): My own feeling is that there should be no publicity at all until we know more about it. The survey is under discussion, and that is all. We have arrived at no conclusions, and I think it very immature to go before the public with any statement at this time. I don't feel like making any such statement.

Dr. W. C. Ellet (Berrien): I think about three years ago in this very room discussion on something like this was brought up on an economic question, and several hours later the newspapers all came out with the statement that doctors were against charities and clinics.

I think Dr. Marshall's suggestion that no information be given out at this time is excellent until we know more about it, because they will twist it the way they want to in order to make news out of it.

Dr. O. G. Johnson (Tuscola): I think it will be impossible to keep from the press any news regarding this meeting. We know that the press in the state is hostile to the medical profession.

My suggestion would be that some member of the Committee, or three members of the Committee,

be authorized to write a report and request the press to print it verbatim, and not leave it to any reporters because if you do you will not get the information we wish to have go to the public.

The Speaker: Whether anything is printed or not? Do you wish to withdraw your motion, then, Dr. Christian?

Dr. Christian: Yes.

Dr. A. C. Biddle (Wayne): May I ask if we have done everything that is necessary to promote this work? I don't see what we have done. We haven't continued our Committee. The Committee simply asks to be continued. I think we ought to take some action. When we adjourn today, we adjourn sine die. The Committee ought to be reappointed.

The Speaker: Do you wish to put that in the form of a motion?

Dr. Biddle: I would like to put the motion that that Committee be instructed to continue its work, have the guidance and everything else that is necessary, and report not to this House of Delegates but to the House of Delegates. You and I may not be here, but we have to instruct what this Committee is to do.

The Speaker: Have you heard Dr. Biddle's motion?

Dr. Biddle: I just made a motion in effect that this Committee be authorized to do such research work as necessary, and that it shall report to the House of Delegates at the next meeting, if that is proper.

Dr. W. C. Ellet (Berrien): I think the Committee in its summary state that it should be carried on.

Dr. Biddle: The mere adoption of that report is not instruction.

The Speaker: This is a Special meeting to hear this report. In order to entertain anything like that, we shall have to have a vote on it. I don't believe this assembly, unless you vote by a two-thirds vote, can take up any motions of this kind. I don't think that would be constitutional.

Dr. E. C. Baumgarten (Wayne): Dr. Biddle's motion pertains to the question at hand, and I don't think you need any special ruling on that. It is to bring up some outside business not pertaining to the call of this meeting.

The Speaker: The Chair is willing to receive an objection. If there is no objection on the part of the assembly, we will take up Dr. Biddle's motion.

Dr. Baumgarten: I support it.

Dr. J. D. Brook (Kent): Is it proper to instruct the Committee while we are in Executive session? Shouldn't the Executive session adjourn and then instruct the Committee while we are in ordinary session?

Dr. Biddle: I accept that.

The Speaker: The Chair will rule we are in ordinary session.

Dr. L. J. Hirschman (Wayne): I move that we arise from Executive session.

The motion was regularly supported, was put to a vote and carried.

Dr. Biddle: I repeat now, Mr. Speaker, my motion in regular session.

Dr. Baumgarten: I second it.

The Speaker: That the Committee be continued and be instructed to report at the next meeting of the House of Delegates. Is there any discussion, gentlemen?

Dr. Marshall asks for information: "From whom do we receive our orders?" From the House of Delegates.

The motion was put to a vote and carried.

The Speaker: The motion is carried.

Dr. Baumgarten: I think right along with Dr. Biddle's idea goes the idea of funds, which I think is quite important. The Committee mentioned a matter of $5,000, which I think should have a little discussion, a little attention at this time.

To bring the matter before the House, I would move you, Mr. Speaker, that the House of Delegates authorize the appropriation of $5,000 for meeting this work.

The motion was supported by several.

The Speaker: Gentlemen, you have heard from Dr. Baumgarten. Do you wish to discuss that motion, Dr. Corbus?

Dr. Burton R. Corbus (Kent): What our present financial status is?

Dr. Biddle: That, and whether we may instruct you, too.

Dr. Corbus: You may request but not instruct. For your information, however, I will say to you, and you may ask any other questions from The Secretary who has things on his tongue's end in a financial way better than I have, that we have in our funds $13,760 for the Society at the present time. That is in our surplus fund. Our bonds have not defaulted, but they have sunk very materially, and when I say $13,760 I have reference to December 31. Having just spoken to my banker about a bond that two months ago was worth $105 and I found is now $82, I don't know what our worth is today.

Are there any other questions that anybody would like to ask further?

Dr. Baumgarten: How does the Council feel disposed toward this appropriation?

Dr. Corbus: The Council feels that this is so important that they would go as far as our finances would permit and still allow us to go on with the general routine of the Society. We are extremely sympathetic with the whole thing.

The Speaker: Is there any further discussion of Dr. Baumgarten's motion?

The motion is that the Council be requested to appropriate $5,000 to aid this Committee in their investigation.

Dr. E. D. Spalding (Wayne): The report calls for $2,500. (Cries of "No")

The Speaker: Is there any further discussion, gentlemen?

The motion was put to a vote and was carried.

Dr. W. C. Ellet (Berrien): What I was going to ask was to have The Secretary read over again that part about the appropriation.

The Secretary read the recommendation of the Committee on Page 38 of the report.

The Secretary: The Committee stated in regard to funds that they were unable to determine approximately what the survey would cost, but suggested that probably the funds might be obtainable from some other sources, and that only approximately $2,500 of the Society's funds would be required for the Committee for organizational purposes and securing these other agencies' assistance and contributions. The Council, after the Pontiac meeting, appropriated to the Committee $300 for its work up to the present time, and the Committee has expended something like $200 of that $300 appropriation.

The Speaker: Is there any further business? Are there any matters you gentlemen wish to bring up in connection with this survey? If not, a motion to adjourn will be in order.

Dr. Ellet: Before that adjournment, do we have a session this afternoon?

The Speaker: No, this is the final session.

On motion regularly made and seconded, it was voted to adjourn at twelve-ten o'clock.

F. C. WARNSHUIS,
Secretary.

MINUTES OF THE MEETING OF THE JOINT COMMITTEE ON PUBLIC HEALTH EDUCATION

Ann Arbor, February 4, 1932

Present: President Ruthven, Chairman; Drs. W. R. Davis, Olin, Randall, Bruce, A. C. Thompson, Sinai, Jackson, Haynes, Huber, Sollar, Henderson, and Fisher; Miss Delavan of the Department of Health; Miss Josephine Davis of the American Red Cross; Mr. A. W. Thompson of the Department of Public Instruction; and Mr. Werle of the Tuberculosis Association.

1. Minutes of the meeting held in Ann Arbor on June 1, 1931, were read and approved.

2. Report of the field work, by Dr. Soller. Dr. Soller reported that of 142 schools visited, 138 schools were put on the health education program.

3. Report of the office administration, by Dr. C. A. Fisher. At the request of the Secretary, Dr. Fisher reported on a study which he has been carrying on as to the number and relative efficiency of the health lecture assignments. His report is as follows:

	1930–1931	1931–1932
Total number of high schools in which lectures were scheduled	101	138
Total number of health lectures scheduled in these high schools	464	505
Health lectures given to date (Feb. 4, 1932)		272
Number of lectures missed due to failure of doctors to appear as per schedule		53
Number of reports on health lectures classified as good		86 (79%)
Number of health lectures classified as fair		15 (13%)
Number of health lectures classified as poor		9 (8%)

Following the presentation of the data given above, Dr. Fisher read a number of communications of a commendatory nature and also a number of communications that were critical.

4. Report on newspaper publicity, by Dr. Bruce. This report in detail, as submitted by Dr. Bruce, was ordered placed on file.

5. Treasurer's report. Dr. Warnshuis, treasurer of the Joint Committee, was not present at the meeting but sent in his report covering the period included between December 29, 1930, and December 29, 1931. According to this report the balance on hand on December 29, 1931, was $862.41.

6. Report on next year's program, by Dr. Henderson. This report included a summary of the growth of the health education program up to date. Special attention was called to the fact that this year the number of schools in which the program is carried on and the number of lectures given exceeds that of any other year in the history of the work. Also, special attention was directed to the fact that of the lectures given 80 per cent were classified as good to excellent and only 8 per cent were classified as poor. Dr. Henderson gave in brief outline his ideas as to the desirability of a closer coöperation between the Joint Committee and the State Course of Study program. He also made special mention of the desirability of coöperating with city health programs, as conducted through local organizations.

6. New business. (a) It was moved and carried that the Secretary communicate with the Treasurer asking that statements be sent to the various member organizations, asking for the payment of the contributions agreed upon at the meeting held on January 22, 1931, at which time it was moved and carried that in view of the fact that there was at that time a surplus in the hands of the Treasurer, contributing members be asked to pay hereafter one-fourth of the amount previously paid in by the respective member organizations, this sum to be expended for such purposes as may be approved by the Committee.

It was moved and carried that the Committee on Publicity and the Committee on Lecture Outlines be authorized to draw upon the treasury for such sums as are necessary for publicity and lecture outline purposes, within the limits of the amount on hand.

(b) In connection with Dr. Soller's report on Field Work, it was recommended that, in securing speakers for the high school health education programs, the field worker, after consulting the Secretary of the local County Medical Society, make arrangements directly with the doctors who are willing to take part on the health education program, as regards specific assignments.

7. After some discussion as to the desirability of holding one, two, or three meetings a year in the future, it was moved and supported that the formal annual meeting should be held, whenever possible, in conjunction with the State Medical Society, and that additional meetings be subject to call by the Secretary, in case contingencies should arise making such meetings necessary.

8. Motion to adjourn.

W. D. HENDERSON, *Secretary.*

REPORT OF CIVIC AND INDUSTRIAL RELATIONS COMMITTEE

The Civic and Industrial Relations Committee met in Jackson, Michigan, at the Hayes Hotel, at 12:15 P. M., January 27, 1932. Doctors Curry, Geib, Kudner, Riley, Penberthy, and Collisi were present. Doctor Moll, President of the Society; Doctor R. G. Leland, Director of the Bureau of Medical Economics of the American Medical Association; and Doctor R. H. Denham of Grand Rapids were visitors.

Doctor Leland outlined the progress of the study of health and accident insurance proof blank procedures which is being conducted on a nation-wide basis. He stated that, according to information received from the State Commissioners of Insurance, there appears to be no statute nor insurance department regulation in any state requiring that physicians shall furnish specific information for such claim proofs. Many of the statutes do provide that there shall be due proof of loss but the interpretation of due proof of loss is left largely to the insurance companies. Recently Doctor Leland conferred with Mr. Robert K. Metcalf, Manager of the Claim Department of the Connecticut General Life Insurance Company, who has been made chairman of the special committee appointed by the International Claim Association, and two other large insurance membership organizations have been circularized for data. Mr. Metcalf has begun a study of the problem with a point of view sympathetic to the medical profession on many points. He hopes that the claim proof blanks may be changed to a shorter form; however, he can give no assurance that the insurance companies will be willing to pay a fee of $2.00 for each blank filled out. He has assured Doctor Leland that he will do everything possible to bring about an amicable agreement. Dr. Leland expects to have a more detailed report for the Meeting in New Orleans.

It was suggested by Dr. Penberthy that the committee meet jointly with the Attorney and Chief Adjuster of the Detroit Automobile Club, together with Mr. L. J. Cary of the Michigan Mutual Liability Company, for a discussion of the highway accident problem in which physicians and hospitals are meet-

ing difficulty and delay in securing settlement for their services.

Meeting adjourned at 2:30 P. M.

Respectfully submitted,

HARRISON S. COLLISI, *Chairman.*

JUST SOME "DO'S AND DONT'S"

1. Do pay your dues before April 1, to obtain the $2.50 rebate for 1932.
2. Don't argue with a patient or his attorney who threaten suit. Refer the problem to the Medico-legal committee.
3. Do have X-rays of all fractures, before and afterwards, that you attend.
4. Don't miss any of your County meetings.
5. Do offer to serve on a local committee and do work when so appointed.
6. Don't fail to patronize our Journal advertisers.
7. Do urge prophylactic measures for your patients and do administer them yourself.
8. Don't overlook urging periodic physical examinations.
9. Do read Society Activity items every month.
10. Don't increase your expenses. Cut out non-essentials and save something each month.
11. Do plan an hour's reading every day.
12. Don't forget to file your income return by the 15th.
13. Do agree to contribute a paper or case report for your local program.
14. Don't knock but boost your local and state organizations.
15. Do urge the non-member to join. Invite him to your next meeting.
16. Don't slump. Keep on working. We can beat this depression.
17. Do induce your wife to join the local auxiliary.
18. Don't neglect being a Fellow of the A. M. A. that protects your national interests and sends you the best national medical Journal.
19. Do boost everlastingly all your society activities.

F. C. W.

AVITAMINOSIS: III. SPECIFIC EFFECT OF VITAMIN B ON GROWTH AND LIPID METABOLISM: LIPEMIA AS SYMPTOM COMPLEX IN THIS AVITAMINOSIS

For the past four years Barnett Sure and Margaret Elizabeth Smith, Fayetteville, Ark., have been searching for a symptom-complex in vitamin B deficiency as may be evidenced by the blood chemistry picture. Their results, however, were, in the main, negative. They have considered of little clinical importance the anhydremia and the increase in the nonsugar reducing substances of the blood, which were frequently encountered. They feel, however, that their present observations may serve as an aid to the diagnostician, since they indicate the presence of a marked lipemia, *i.e.*, a large increase in the concentration of lecithins, fatty acids and the iodine number of the fatty acids, indicating unsaturation, in lactating mothers and nursing young and also in weaned animals, in this avitaminosis. Since there has been no definite yardstick by which to measure vitamin B deficiency from the standpoint of chemical analysis of the blood, as, for instance, the low phosphorus concentration in the case of rickets, it has been difficult to diagnose, positively, borderline cases of vitamin B deficiency as it exists in the United States; and it is hoped that a chemical study of the lipids of the blood will prove helpful to the clinician as a guide in vitamin B therapy, particularly in infant nutrition, in which anorexia is a common symptom complex—*Journal A. M. A.*

COUNTY SOCIETIES

BRANCH COUNTY

The annual meeting of the Branch County Medical Society was held January 21, 1932. The following officers were elected: President, Dr. Kenneth L. Olmsted, Coldwater; vice president, Dr. H. A. Scovill, Union City; secretary-treasurer, Dr. C. E. Merritt, Quincy; delegate to state convention, Dr. A. G. Holbrook, Coldwater; alternate, Dr. R. L. Wade, Coldwater; Medico-Legal Committee, Dr. S.

EATON COUNTY

The following are the newly elected officers of the Eaton County Medical Society: President, Dr. C. A. Stimson, Eaton Rapids; vice president, Dr. Austin Burdick, Grand Ledge; secretary-treasurer, Dr. B. Van Ark, Eaton Rapids; delegate to State Convention, Dr. A. G. Sheets, Eaton Rapids; alternate, Dr. K. Anderson, Charlotte.

B. VAN ARK, *Secretary.*

GOGEBIC COUNTY

The following officers were elected for 1932 in the Gogebic County Medical Society:

President, Dr. T. R. Rees, Ironwood; vice president, Dr. H. A. Pinkerton, Ironwood; secretary-treasurer, Dr. C. E. Anderson, Bessemer; State delegate, Dr. W. E. Tew, Bessemer; alternate State delegate, Dr. A. J. O'Brien, Ironwood; Defense League representative, Dr. D. C. Pierpont, Ironwood.

The following were elected as members of the Board of Directors: Dr. T. J. Hombley, Ramsay; Dr. W. E. Tew, Bessemer; Dr. E. H. Madajesky, Ironwood; Dr. C. C. Urquhart, Ironwood; Dr. M. M. Hanson, Marenisco.

C. E. ANDERSON, *Secretary.*

GRATIOT-ISABELLA-CLARE COUNTY

The January meeting of the Gratiot-Isabella-Clare County Medical Society was held in the Wright Hotel, Alma, Thursday evening, January 21.

Twenty had dinner together and two members came in after dinner.

President Burt called the meeting to order. Dr. Highfield presented a case of Addison's disease.

The minutes of the December meeting were read and approved. A letter from the State Commissioner of Health, C. C. Slemons, thanking the Gratiot County doctors for their assistance in giving toxin-antitoxin to the school children was read. Other communications were also read, one notifying us that the State Society dues were reduced to $7.50; at this point motion was made and carried that we reduce the County Society dues to $2.50 for 1932. Motion was made and carried that Dr. T. J. Carney act as delegate and Dr. W. L. Harrigan act as alternate to the State Society meeting.

President Burt announced the following committee appointments for 1932: Medico-legal Committee—Dr. B. C. Hall and Dr. W. L. Harrigan; Legislative Committee—Dr. C. D. Pullen and Dr. C. F. DuBois.

President Burt then introduced Dr. A. O. Hart from St. Johns, who talked on "The Acute Abdomen." The doctor passed around a typewritten outline, dividing the abdomen into right upper quadrant, left upper quadrant, right lower quadrant, left lower quadrant. He discussed clinical signs and symptoms and etiology in general, then each quadrant

in detail. Dr. Hart's talk was discussed by Doctors T. J. Carney and L. F. Hyslops. Cases were also described by Doctors Lamb and Budge and Luton, after which President Burt thanked Doctor Hart for his instructive talk.

Meeting adjourned.

E. M. HIGHFIELD, *Secretary.*

HILLSDALE COUNTY

Hillsdale County Medical Society convened at the Orange Lantern Tea Room on Tuesday, January 19, 1932, at 6:30 P. M., for the annual meeting.

After the dinner, the vice president, Dr. C. L. Hodge, called the meeting to order.

Minutes of last meeting were read and approved.

The society then proceeded to the election of officers for the current year, resulting as follows:

President, C. L. Hodge, Reading; vice president, H. F. Mattson, Hillsdale; secretary-treasurer, D. W. Fenton, Reading; delegate to State Medical Society, B. F. Green, Hillsdale; alternate, A. E. Martindale, Hillsdale.

Dr. Mattson then read a valuable paper on "Postoperative Pulmonary Embolism." Discussion by Dr. Green, Dr. Miller and others.

Dr. Green next gave a most interesting report of a case of injury from a fall on an upstanding pitch fork handle resulting in rupture of the bowel. Treatment was laparotomy with free drainage; with restoration to health. Discussion by Drs. McFarland, Miller, Poppen, Mattson and others. This case shows the value of prompt surgical interference in these desperate injuries of the bowel, followed by absolute rest and careful postoperative attention.

A discussion of the question of the fee bill showed that there seems to be no well recognized fee bill in use by the society at the present time. After some review of the matter, it was moved, supported and carried that the old fee bill of ten or twelve years ago be brought to the next meeting by the Secretary for discussion and amendment if needed.

Bill of the Secretary of $9.75 for incidentals was approved.

It was moved, supported and carried "that in view of the rebate of $2.50 in dues by the State Society, the dues for the county society be reduced until further notice to $1.00 per year, as prior to 1928."

The society then adjourned.

D. W. FENTON, *Secretary.*

JACKSON COUNTY

The first meeting of the Jackson County Medical Society for the New Year was held Tuesday evening, January 19, 1932, in the Rose Room of the Elks Temple, with Dr. C. E. DeMay presiding.

Dr. Frank Van Schoick, chairman of the Health Education Committee, gave a report on the plans of this committee for the coming year. These will include:

1. Securing speaking engagements for local physicians on health topics.
2. Securing a regular time for broadcasting health topics over the local broadcasting station, WIBM.
3. Replacing the present local newspaper syndicate by special articles prepared by the Michigan State Medical Society.
4. Arranging a special program for Health Education Week.
5. Arranging a program on food facts for women.
6. Coöperating with the State Board of Health on Child Hygiene.
7. Securing the aid of the local Women's Auxiliary.
8. Continuing the campaign for periodic health examinations.
9. Preparing special pamphlets for distribution.

The meeting was then turned over to Dr. Phillip Riley, chairman of the program committee, who introduced Dr. Louis Hirschman of Detroit. Dr. Hirschman gave an interesting illustrated lecture on the subject, "Whither Are We Drifting with Colitis."

Attendance numbered sixty-six.

KENT COUNTY AT HOME

On the evening of February 10 the members of the Kent County Medical Society realized a desire that has existed for twenty years—they occupied their own Society home for the first time.

The occupying of permanent headquarters, club room, library, reading room and cafe has been a subject of discussion and investigation at times during the past twenty years. Some reason or other prevented realization. Two years ago a new committee was appointed. Plans were developed that culminated in an agreement with the owner of the new Medical Arts Building and the lease of necessary space was executed. Architects presented floor plans which were eventually accepted and in due time contractors completed their work. The committee then set about to secure the necessary furnishings and with the coöperation of decorators and furniture manufacturers the new club headquarters were furnished. It is said that the furnishings are the finest in the country.

Its labors completed, the committee and officers prepared for the homecoming which was held on the evening of February 10, at six P. M. One hundred fifty-two members sat down to the prepared repast. Following the dinner the committee made its final report through its chairman, Dr. J. C. Foshee. He turned over to the Society in behalf of his committee the Society's new home. It consists of: Library stack and reading room, club auditorium, card room and cafe. The furnishings are beyond description—they must be seen to be appreciated.

Following the acceptance of the report, the Society presented Dr. Foshee with a cane, expressive of the appreciation of all the members. Following two short addresses by members, the chairman of the Board announced that $4,000.00 was needed to liquidate all indebtedness. A blackboard, blocked in squares representing sums from $5 to $100 and totaling $4,000, was brought in. The Chairman asked the members to assume to pay the amount in the square they voluntarily selected. Never have we encountered the spirit and enthusiasm that followed. Within thirty minutes every square was taken and with additional subscriptions a sum of over $5,000 was raised, enabling the officers to pay all bills and have a working reserve.

Kent County thus entered its new home without incumberment. The society welcomes visiting physicians to make this their headquarters when in Grand Rapids.

LAPEER COUNTY

The Lapeer County Medical Society held their regular meeting on January 14 as guests of the Lapeer City Hospital, with a good attendance.

Dr. D. B. Zimmer, of Lapeer, presented an interesting paper on "Infantile Paralysis," reporting cases observed in the recent epidemic.

The newly elected officers are as follows: President, H. M. Best, Lapeer; vice president, D. J. O'Brien, Lapeer; secretary-treasurer, J. R. McBride, North Branch.

J. R. MCBRIDE, *Secretary.*

LUCE COUNTY

The January meeting of the Luce County Medical Society was held at the home of Dr. R. E. Spinks, with Drs. Spinks and Bohn as hosts. The ladies were present, and an excellent dinner was served.

Following the meal the ladies played bridge. The meeting was called to order by President Redwine. Minutes of past meeting were read and approved.

A paper on "Insanity" was presented by Dr. M. J. Morrisey, followed by a general discussion

The following officers were elected for the ensuing year: President, Dr. R. E. L. Gibson; vice president, Dr. C. B. Toms; secretary-treasurer, Dr. Geo. F. Swanson; delegate, Dr. H. E. Perry; alternate, Dr. E. H. Campbell.

GEO. F. SWANSON, *Secretary.*

WAYNE COUNTY

HOUSEWARMING FOR WAYNE COUNTY SOCIETY

The Wayne County Medical Society, Detroit, composed of approximately sixteen hundred members, held its Housewarming in the new headquarters of the Society, 4421 Woodward at Canfield, Detroit, on Friday, January 29. The affair was staged by the Welfare Committee of the organization and attracted over twelve hundred physicians, their wives and friends. The proceeds of the evening's entertainment will be used for charity.

The new building of the Wayne County Medical Society, the former David Whitney home, contains fifty rooms, some of which are as large as modern auditoriums. The house is famous in Detroit for its beautifully carved woodwork and parquet floors, as well as for its twenty fireplaces, each of different marble or tinted brick, and for its stained glass windows.

In this chateau-like edifice, the Wayne County Medical Society will be able to do a bigger job for its members and increase the scope of its activities to include many civic responsibilities imperative for its continued progress.

The first floor of the new building will be given over to the committee rooms, lounges and dining rooms of the Society. The second floor will contain the Executive Offices, together with the offices of the Detroit Physicians Business Bureau, the collection department of the Society. The Smokers' Room, billiard and ping-pong room will occupy panelled space in the basement. A new feature of the Society headquarters will be the Seniors' Room, to be set aside for doctors who have been in practice over twenty-five years. The Noon-Day Study Club, composed of physicians under the age of forty, will also occupy space in the new Wayne County Medical Society building.

NEW HEADQUARTERS BUILDING, WAYNE COUNTY MEDICAL SOCIETY

MACOMB COUNTY

At a regular meeting of the Macomb County Medical Society, held on Monday, February 1, at the Medea Hotel, Mt. Clemens, at which twenty members were present, Dr. Morrell M. Jones, of Pontiac, Michigan, gave an extremely interesting and instructive talk on "The Management of Persistent Occipito-Posterior Position."

His talk was supplemented with two reels of fine motion pictures. Doctor Jones' talk stimulated a great deal of discussion on the subject.

The Membership Committee reported favorably on the application of Dr. C. White, of Fraser, Michigan, who was duly elected.

There was also a new application submitted by Dr. M. M. Wilde, of Warren, Michigan.

J. N. SCHER, *Secretary.*

MIDLAND COUNTY

On call of the President, W. D. Towsley, the members of the Midland County Medical Society met at the Country Club House and all nine members had dinner together on January 12, 1932.

At 1:00 p. m. the meeting was called to order. Minutes of previous meeting were read and approved.

Motion by Dr. Sherk that Dr. C. V. High, Sr., be elected president of the society for the year 1932. Carried.

Motion by Dr. High, Jr., that Dr. Dougher continue as secretary for the year 1932. Motion carried.

On talks for the good of the society it was understood that we try to meet once a month.

Adjourned to meet on call of the president.

E. J. DOUGHER, *Secretary.*

MONROE COUNTY

Monroe County Medical Society has had some interesting meetings this year.

On November 19, 1931, Dr. George Belote of the University Hospital, Ann Arbor, gave a talk on the "Treatment of Syphilis." The talk was given from a practical point of view and was greatly appreciated by everyone present.

On December 17, Dr. Howard Waggoner, of the Department of Neurology, Ann Arbor, spoke on "The Places of Neurology in General Practice." This was a valuable address.

On January 21, 1932, Dr. J. Milton Robb, Detroit, president-elect of the Michigan State Medical Society, and Mr. William J. Burns, executive secretary of the Wayne County Medical Society, were the speakers of the evening. The city editor of the *Monroe Evening News,* Mr. F. W. LaRouche and his wife and the doctors' wives were also guests at the meeting, and the dinner served at the Park Hotel. Dr. Robb spoke on "Medical Economics." Mr. Burns discussed the panel system in England. Both speeches were pertinent to our present situation and were greatly appreciated.

FLORENCE AMES, M.D., *Secretary.*

NORTHERN MICHIGAN

The February meeting of the Northern Michigan Medical Society was held at the Perry Hotel, Petoskey, February 11, 1932, with an attendance of twenty-one members and guests. We were honored by the attendance of four new doctors, who immediately made application for admittance to our society.

After partaking of an excellent dinner the meeting was called to order by the President, Dr. William Stringham.

Minutes of the previous meeting were read and approved. Some correspondence was read by the Secretary.

Reports of committees were heard. Dr. Sher of Mackinaw City was voted a membership in the Society.

Program Committee appointed as follows: Drs. Mast and Van Leuven of Petoskey and Dr. Brenner of East Jordan.

Motion was made and carried that the President appoint a Committee of Public Relations, such committee to consist of two members from each county, and their findings to be subject to the approval of the Society as a whole.

The business for the evening was then suspended and the program turned over to our guest, the State secretary, Dr. F. C. Warnshuis. Dr. Warnshuis gave a very interesting talk on "Head Injuries." This was followed by another timely talk on State Society Activities. A general discussion then took place.

This meeting was very interesting and every member present felt he had been amply repaid for attending. Dr. Warnshuis was given a rising vote of thanks for coming to talk to us. Meeting adjourned.

E. J. BRENNER, *Secretary.*

OCEANA COUNTY

The Oceana County Medical Society held a meeting December 30, 1931, at which time the following officers were elected for the year 1932: President, Dr. L. P. Munger, Hart; vice president, Dr. A. R. Hayton, Shelby; secretary-treasurer, Dr. Clinton Day, Hart; delegate to State Meeting, Dr. A. R. Hayton, Shelby; alternate, Dr. J. H. Nicholson, Hart.

Applications for membership of Dr. N. W. Heysett of Hart, and Dr. William Heard of Pentwater, were referred to committee to report at next meeting.

CLINTON DAY, *Secretary.*

O. M. C. O. R. O. COUNTY

The regular meeting of the O. M. C. O. R. O. County Society was held November 11, 1931, Dr. L. A. Harris, presiding. Minutes of the last meeting were read and approved.

The report by Dr. Keyport, delegate to the meeting of the State Society at Pontiac, 1931, was read and accepted. Discussion followed.

Members present: Dr. L. A. Harris, Dr. C. R. Keyport, Dr. C. G. Clippert, Dr. McKellop, Dr. Lee, Dr. Ford, Dr. McDowell, Dr. Curnalia.

Report of the Secretary and Treasurer was read and approved.

A communication of Dr. Warnshuis relative to examination of unemployed, was brought before this society. Dr. Curnalia, secretary, was instructed to write Dr. Warnshuis and to extend all possible aid in the jurisdiction of this society to its full cooperation. Motion by Dr. Keyport and supported by Dr. Clippert that this motion be accepted.

Election of officers: Moved by Dr. Clippert and supported by Dr. Harris that Dr. G. S. McDowell be elected president of this society for the ensuing year, 1932. Motion carried. Moved by Dr. Harris and supported by Dr. Keyport that Dr. Ruey O. Ford be elected vice president of this society for the ensuing year, 1932. Motion carried. Moved by Dr. Harris and supported by Dr. Clippert that Dr. Curnalia be elected secreetary and treasurer of this society for the ensuing year, 1932. Motion carried. Moved by Dr. Ford and supported by Dr. Harris that Dr. Keyport be elected as delegate to the State Society for the ensuing year, 1932. Motion carried. Moved by Dr. Harris and supported by Dr. Ford that Dr. Clippert be elected as alternate delegate

to the State Society for the ensuing year, 1932. Motion carried.

A motion was made by Dr. Keyport, seconded by Dr. Harris, that the next meeting of this society be held in West Branch at some date in May, 1932, with the amendment that the president and secretary arrange for a speaker to address a public meeting after the business meeting of this society. Motion carried.

Adjournment.

CLIFFORD C. CURNALIA, *Secretary.*

WOMAN'S AUXILIARY, MICHIGAN STATE MEDICAL SOCIETY

MRS. J. EARL McINTYRE, President, Lansing
MRS. W. E. McNAMARA, Secretary, Lansing

THE DOCTOR'S WIFE

MRS. GUY L. KIEFER
DETROIT, MICHIGAN

I am glad that I can take refuge in a general subject like "The Doctor's Wife" and do not have to talk on the subject, "How to Be a Successful Wife to a Doctor."

It is so much easier to discuss problems in general than to discuss the technic of solving them.

It may have occurred to you, as it did to me, to ask whether the task of being a doctor's wife is much different from that of being the wife of any professional man, conceding that love is there in both cases. The answer is unhesitatingly *yes*—not just because that has been our experience; but because statistics compiled by Dr. Dublin show that a physician's very life is shortened by the irregular hours, the liability to emergency calls, at any hour of the day or night, the exposure to all kinds of weather and the higher percentage of exposure to communicable disease. This very irregularity and strain on the doctor puts a burden on the wife of seeing that he gets the maximum rest and recreation from his home life. This sounds simple but with the complications that come with children and the increasing competition of the amusement world it is a problem that calls for talents as an executive that equal those required in the industrial world.

Quoting Ruth Steele Brooks, from an article in the North American Review "In Defense of Housewives," "The fact is, we housekeepers are, to a great extent, the victims of a wrong psychology, of a sort of inferiority complex—for we are apt, in this age, because we are the recipients of no weekly or monthly check, to esteem too greatly the work of those who are. Because our compensation is in kind rather than in cash, we tend to undervalue both it and the labor involved."

But when all is said and done, is it a narrow and unimportant concern to manage your house well, with all that that implies? Between you and me, there is at bottom a very genuine respect for our job.

The whole point of the matter is that we, too, should conceive of our work as a profession, one of the most honorable in existence, certainly the oldest. Is it not a composite of many of the professions which women pride themselves on practicing, doctor, nurse, dietitian, chemist, chef, economist, teacher, interior decorator, and, one might add, in many cases architect and landscape gardener. These are but a few of the lines along which the average housekeeper and mother of a family may be called upon to exercise her talents, any one of which is considered a thoroughly reputable calling.

But of you, as Doctors' Wives, many other duties are required—oh! so many I need not enumerate any one of them. You all know how often you are called upon to assist in the office, answering so many telephone calls and so often saying, "Doctor is not in," when he is sitting or resting beside you at the time. Then, too, acting as chauffeur, freezing in the cold, while he is making his calls. In so many, many ways the wife can be such a help. It is she who must create the atmosphere of the house. Each of us who follows the profession of homemaker should strive to create a center of good communications, a nucleus as it were, where harmony and cheerfulness can thrive, and where friends and acquaintances like to be. In other words, good housekeeping means planting a bacillus of order, harmony, comfort and friendliness in the body social.

Here is a story of two young engaged people who often dropped in for tea or dinner in a quite informal way with some mutual friends. The young man said, "If we can only team together as those two. So many common interests, such a warm and cheery welcome for friends, such good talk, always amusing, never malicious."

And so, in the face of the many things expected of housewives (and more especially of wives of physicians) the many important things to which no one else can attend and which really come within the broad scope of home duties, surely none can deny the opportunity, nay, the necessity, for all 'round development which this commonest of professions offers: the profession whose ideal is perhaps best expressed by the holding fast to "whatsoever things are lovely, whatsoever things are of good report."

The ideal home has been defined by President Hoover as, "It is the beginning of self-government. It is the throne of our highest ideals. It is the source of the spiritual energy of our people."

That statement of President Hoover is quite true, but, my friends, it is the wife who must make it so.

The National Organization has made several attempts to obtain news articles from the Michigan State Medical Auxiliary. To date, the publication committee has been unable to furnish news.

Through the Journal the committee is making an earnest effort to obtain this material. The county auxiliaries are urged to send all news items to Mrs. Chas. J. Barone, 18261 Santa Rosa Drive, Detroit, Mich., on or before the tenth of each month so they can be publicized in the Journal and a copy sent to the National Organization.

Success of the Publicity Committee depends upon the promptness and conscientious work of those in charge of publicity in each county auxiliary. Let us make this year a success by sending in something of importance each month.

MRS. CHAS. J. BARONE,
Chairman, Publication Committee.

BAY COUNTY AUXILIARY

The monthly meeting of the Women's Auxiliary to Bay County Medical Society was held on Wednesday evening, January 28, at the home of Mrs. C. W. Ash, with twenty-five members present. A delicious pot luck dinner was served from the dining table, attractive with a lace tablecloth and a centerpiece of spring flowers. Guests were seated at small tables in the living living room. Before the business meeting, which was called to order by the President, Mrs. C. A. Stewart, she introduced Mrs. Guy Petterson, who sang several vocal selections, accompanied by

Mrs. Gerald Walsh. Reports of the secretary and treasurer were then read, also by-laws, by Mrs. T. G. Nilson. An article from the January issue of The Journal of American Medical Association on The Medical Organization of the Auxiliary, by Mrs. J. Earl McIntyre, was read by Mrs. F. S. Baird. While listening to these reports, the ladies sewed for the babies in Mercy Hospital. No new business being in order, we adjourned to meet in February, time and place to be announced later.

LOUISE M. SWANTEK.

WAYNE COUNTY AUXILIARY

The regular monthly meeting of the Wayne County Auxiliary was held in the Wayne County Medical Society's new home, 4421 Woodward Avenue, February 9, 1932, at 2 P. M.

Dr. Lee Vincent of the Merrill Palmer school spoke on "The Problems of Youth." Her talk was thoroughly enjoyed by all present, and mothers of adolescent children felt much encouraged in their task, which they sometimes find very trying in this modern age. We also had the pleasure of having Miss Olga Fricker, Director of the Bonstelle School of Dancing, assisted by two of her pupils, in a short dance recital. Miss Fricker gave a short talk on "Dancing for Health," demonstrating her meaning by having one of her pupils go through the exercises taught for the foundation of dancing. The Program Committee, Mrs. A. S. Brunk, chairman, Mrs. Frank Hartman and Mrs. M. K. Mihran, are to be commended on the interesting and instructive programs they have brought us.

The Welfare Committee reported much work completed since the last meeting, and the neighborhood sewing-bees progressing nicely. In addition to the work accomplished in this way a closer acquaintanceship between the doctors' wives is brought about.

The social committee reported the plans for the annual bridge party to be held in the new home on Saturday, February 27.

Wayne County feels very grateful to the State Board for the action taken in regard to lowering state dues. Members are finding it hard to accomplish all that has been undertaken for this year—the student loan fund, the antinarcotic association work and our welfare work which we are doing for Detroit's needy school children through the Board of Education. All seem to be needed so badly that none should be discontinued.

NOISE

The effects of continuous noise on the human body and the nervous fatigue induced by excessive noise are difficult to evaluate. An engineer says that "within a generation, noise will vie with disease unless the same mechanical ingenuity that has called the mechanical robot of the age into existence shall also be able to endow it with a soul of quiet." City dwellers are saturated with noises that emanate from street traffic, railways, radios, hucksters, factories and what not. The consequence is lessened efficiency, irritability and, in some cases, neurosis. The growing menace of noise and vibration has already called forth an emphatic protest in various parts of the world. The effect of noise on the human organism is being widely investigated. To date, research has shown that sudden noise increases the rate of the heart and respiration and the blood pressure of man and animals. A significant fact shown by experimentation is that the mental effort of the more highly developed individuals is hindered by noise, whereas less mentally developed persons seem to be helped in this way. Sudden noises cause fear reactions which become apparent in muscular tension. Muscular relaxation is difficult, if not impossible, in a noisy environment. The Noise Commission of the City of New York has made the first comprehensive measurement of the average noise level of city streets, taking more than 7,000 readings at many different places. The relative noise level was determined by instrumental measurement of the intensity of sound. The results of the survey show that there are many places in New York where a Bengal tiger could roar without being heard at a distance of twenty feet. Of the complaints of noise in New York, 53 per cent of a total of 11,068 concerned automobile traffic and rail transportation. For years this problem has been carefully studied in England, where one of the great sources of noise is machinery used in the manufacture of textiles. As long ago as 1917, a National Fatigue Elimination Day was initiated as a means of directing attention to preventable noise. In the United States, measures have been taken in several places to prevent noise. Some cities have experimented with the "noiseless" street car. Patented noise-preventing rails for street railways are in use in others. The American Electrical Railway Engineering Association has appointed a committee to study actively the problem of noise and vibration. The prevention of noise is largely an engineering problem. While at present certain legal restrictions on noise may be properly imposed, scientific research is necessary to set up definite standards for measuring the quantity and quality of noise in relation to its effect on the individual. *Jour. A. M. A.*, Jan. 16, 1932.

MACROCYTOSIS OF ERYTHROCYTES AND ACHLORHYDRIA IN PERNICIOUS ANEMIA

Russell L. Haden, Cleveland, belives that an increase in size of the average erythrocyte, best indicated in terms of volume, is the most constant and characteristic finding in the blood in the presence of pernicious anemia. An increased volume index was found in every patient in a series of 152 cases studied by him. Free hydrochloric acid is seldom, if ever, found in the gastric contents of a patient with idiopathic pernicious anemia. An achlorhydria was demonstrated in every one of the 152 patients. The mean corpuscular volume may be quite large even with a relatively high count; therefore it does not vary with the red cell count. If the deficiency which is responsible for the disease is adequately supplied, the cells return to normal size. The first indication of a relapse or a lack of a sufficient quantity of the missing principle is an increase in the volume of the red cells. Macrocytosis may occur in the presence of conditions other than pernicious anemia, but was found only 9 times in a study of 411 patients and normal individuals. Achlorhydria is a frequent finding in various clinical conditions, especially in the age period in which pernicious anemia is most common. A combination of macrocytosis of the erythrocytes and achlorhydria is seldom if ever found, except in the presence of pernicious anemia. The finding of an absence of free hydrochloric acid on gastric analysis and an increased mean corpuscular volume or plus volume index is a practically constant finding and one that is necessary for the diagnosis of active pernicious anemia; if demonstrated, it is almost pathognomonic of the disease.—*Journal A. M. A.*

THE DOCTOR'S LIBRARY

EMERGENCY SURGERY. By John William Sluss, A.M., M.D., F.A.C.S., Associate Professor of Surgery, Indiana University School of Medicine; Zone Surgeon, United States Fidelity and Guaranty Company; Consulting Surgeon, City Hospital; Staff Surgeon, Methodist and St. Vincent's Hospitals, Indianapolis, Indiana; and John Walter Martin, M.D., F.A.C.S., assisted by David Hart Sluss, M.D., F.A.C.S., and Camilius Bowen DeMotte, B.S., M.D. Fifth Edition, Revised and Enlarged with 797 illustrations, some of which are printed in colors. Philadelphia, P. Blakiston's Son & Co., Inc., 1012 Walnut St., 877 pages.

In his preface to the first edition of this work, the author outlined its scope, namely, surgery for the general practitioner written in the hope that it might serve as a guide out of uncertainty in a time of stress. The welcome accorded the book is attested by the fact that it has gone through five editions, the present being the fifth. The present edition may be taken fairly to represent surgical practice as prevailing among the leading surgeons of the present day. New chapters have been added on Post-Operative Nursing Care; Post-Operative Medical Treatment; Perforated Gastric Ulcer with Gastroenterostomy; The Emergency Gallbladder with Cholecystectomy, and Acute Pancreatitis. The subject of fracture is dealt with completely by new chapters on Fracture Apparatus and Operative Treatment of Recent Fractures. It is of convenient size and is well indexed for ready use, making a very desirable handbook on the subject of emergency surgery.

ELECTROTHERAPY AND THE ELEMENTS OF LIGHT THERAPY. By Richard Kovacs, M.D., Clinical Professor and Director of Physical Therapy, Polyclinic Medical School and Hospital, New York. 528 pages; illustrated with 211 engravings. Lea & Febiger, Philadelphia, 1932. Price, $6.50.

The slender library of *worth while* books on this subject is considerably enriched by this well constructed contribution. The author has had an extended experience as a physician and a physical therapist, and exercises a ripened judgment upon the many controversial and indeterminate theories which necessarily encumber a rapidly developing and extremely technical science. Fortunately, the average practitioner can satisfactorily follow the practical and seasoned instructions as to indications and applications, without undue perturbation concerning a precise hypothesis underlying each particular agency or its modification.

The author pays his scientific disrespects to the unscientific promulgation, by a certain minority, that "high frequency currents will penetrate more deeply the higher the voltage."

The student will find this book a wise, conservative, and helpful instructor. The more experienced physician and the specialist may turn to it with the assurance that nothing of real value appertaining to electro- and phototherapy has been omitted. Such a judiciously assembled collection of material will substantially aid in encouraging further advanced thought upon, and an appreciation of, this highly important subject.

J. E. G. W.

CARBARSONE IN TREATMENT OF AMEBIASIS

According to A. C. REED, H. H. ANDERSON, N. A. DAVID and C. D. LEAKE, San Francisco, the drugs so far suggested for the therapy of amebiasis may be classified as follows: *(a)* alkaloids, such as those of ipecac or kurchi; *(b)* oxyquinoline derivatives, such as chiniofon ("yatren"); *(c)* organic arsenicals, such as acetarsone ("stovarsol", and *(d)* miscellaneous antiseptics and astringents, such as the alkyl resorcinols and bismuth compounds. These types of amebacidal agents have been critically evaluated on the basis both of laboratory and of clinical studies. Emetine, the most commonly used drug in amebiasis, is only partially effective in doses which too often are dangerous, especially to the heart, and there seems to be little hope of finding among the ipecac alkaloids a drug meeting the requirements for satisfactory therapy in this disease. The kurchi alkaloids have little if any useful effectiveness. Critical data are not yet available to judge properly of the value of the alkyl resorcinols, although they are interesting. It is indicated that more satisfactory amebacides are to be found among the oxyquinoline derivatives than chiniofon, the only one so far exploited, but since systematic investigation of this group has scarcely begun, conclusions cannot be drawn at the present. Certainly chiniofon has not been as successful as was hoped it would be. Of the organic arsenicals, only acetarsone has been much used in amebiasis, but experience shows that it is only slightly effective and then at doses too often dangerous. With rigorous but arbitrary clinical criteria of "cure," the authors treated forty unselected amebiasis patients with a high degree of success by "carbarsone," a drug, 4-carbamino-phenyl arsonic acid, containing 28.8 per cent of arsenic. The recommended dosage is 75 mg. per kilogram in divided amounts over at least a ten day period, since the arsenic in the compound seems rather slowly absorbed and eliminated after oral administration. Practically, this dosage amounts in the average adult to 0.25 Gm. twice daily for ten days, given in gelatin capsules by mouth. It should not be used in amebic hepatitis, or in amounts which might cause symptoms of arsenic toxicity. More closely than any other drug now exploited does carbarsone meet the requirements of an ideal antiamebic agent. It is clinically nontoxic in effective doses; it may conveniently be administered orally without interference with the patient's usual routine; it has no untoward side actions, and it is comparatively cheap. There is no evidence as yet that it may be of prophylactic value.—*Journal A. M. A.*

AN OPPORTUNITY TO EARN $15,000

Mead Johnson & Company announces an award of $15,000 to be given to the investigator or group of investigators producing the most conclusive research on the Vitamin A requirements of human beings.

Candidates for the award must be physicians or biochemists, residents of the United States or Canada who are not in the employ of any commercial house. Manuscripts must be accepted for publication before December 31, 1934, by a recognized scientific journal. Investigations shall be essentially clinical in nature, although animal experimentation may be employed secondarily.

The Committee on Award will consist of eminent authorities who are not connected with Mead Johnson & Company, the names of whom will be announced later.

There are no restrictions regarding the source of Vitamin A employed in these investigations.

For other details of the Mead Johnson Vitamin A Clinical Research Award, see special announcement, pages 14 and 15, in Journal of the A. M. A., January 30, 1932.